This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

JACOB VOORSANGER MEMORIAL

Wm. Oossanger
Sept. 13, 1[illegible]7
2316 Cal St.
San Francisco
Cal.

Univ. of
California

"TEMPLE OF NEPTUNE AT PÆSTUM."

WONDERS OF ART AND ARCHÆOLOGY

WONDERS

OF

ARCHITECTURE

Translated from the French of M. Lefèvre

TO WHICH IS ADDED

A CHAPTER ON ENGLISH ARCHITECTURE

BY

R. DONALD

ILLUSTRATED

NEW YORK
CHARLES SCRIBNER'S SONS
1886

UNIV. OF
CALIFORNIA

PREFACE.

THE object of the present work is to supply, in as accessible and popular a form as the nature of the subject admits, a connected and comprehensive sketch of the chief architectural achievements of ancient and modern times. To give a history of the art treated of in the following pages, would require much more space than is here devoted to the subject. But whilst this has not been directly attempted, it may be said to be indirectly fulfilled. Commencing with the rudest dawnings of architectural science as exemplified in the Celtic monuments, a carefully compiled and authentic record is given of the most remarkable temples, palaces, columns, towers, cathedrals, bridges, viaducts, churches, and buildings of every description which the genius of man has constructed; and as these are all described in chronological order, according to the eras to which they belong, they form a connected narrative of the development of architecture, in which the history and progress of the art can be authentically traced.

The book has been designed for the edification and amusement of the general reader, and not for the perusal of the professional student. Care has been taken to popularise the theme as much as possible, to make the

436333

descriptions plain and vivid, to render the text free from mere technicalities, and to convey a correct and truthful impression of the various objects that are enumerated. Whilst, however, an effort has been made to place the architectural marvels of the world in a simple and easily recognisable manner before the mind of the reader, there has been retained sufficient of the professional phraseology to instruct the uninitiated in the rudiments of an art which is daily assuming a more prominent position.

Although, as will be seen, the scheme has been carried out within very moderate compass, no building or structure that claimed, or still claims, to be ranked among the wonders of architecture, has been omitted. All the celebrated structures that ever existed, or that are yet in existence, from the Tower of Babel downwards, are described in connection with the various civilisations which gave them birth.

It only remains to be added that the book is translated from the French. Many alterations have, however, been made in it, in order to make it more acceptable to English readers; and a brief and sketchy chapter has been added upon the history and growth of English architecture.

CONTENTS

CHAPTER I.

CELTIC MONUMENTS.

PAGE

The Men-hirs of Croisic, of Lochmariaker, and of Plouarzel—The Cromlechs of Abury and of Stonehenge—Lines of Carnac—Dolmens of Cornwall—Covered Ways of Munster, Saumur, and Gavrinnis 1

CHAPTER II.

PELASGIC AND ETRUSCAN MONUMENTS.

Acropolis of Sipylus—Ruins of Mycenæ—Monte Circello . . 11

CHAPTER III.

ÆGYPT.

The Pyramids—Thebes—Ipsamboul 19

CHAPTER IV.

ASIATIC ARCHITECTURE.

Jerusalem—Nineveh—Babylon—Persepolis—Ellora . . . 29

CHAPTER V.

GREEK ART.

Athens—The Acropolis—The Parthenon—Greek Remains in Italy and Asia—The Temples of Pæstum—The Temple of Diana at Ephesus 43

CHAPTER VI.

ANCIENT ROME.

The Roman Forum—Capitol—Colosseum—Temple of Peace—Arches of Titus and Constantine—Baths of Caracalla—The Pantheon—Trajan Column 62

CHAPTER VII.

THE ROMAN WORLD.

The West—Square House of Nîmes—Roman Gate at Trèves—Arena of Nîmes—Amphitheatre of Arles—Palmyra and Balbek 85

CHAPTER VIII.

LATIN AND BYZANTINE STYLES.

PAGE

Basilicas—Roman Churches—Mosque of St. Sophia at Constantinople—Cathedral of Angoulême 103

CHAPTER IX.

ORIENTAL ARCHITECTURE.

Arab Style—Mosque of Omar—The Alhambra—Mosque of Cordova—India—Puri—Juggernaut—Monuments of Delhi—Persia and China—Ispahan—The Chinese Wall—The Porcelain Tower—Central America 119

CHAPTER X.

ROMAN ARCHITECTURE.

Continental Churches and Cathedrals 138

CHAPTER XI.

GOTHIC ART.

Characteristics of the Gothic Style—Cathedrals of Amiens, Chartres, and Strasbourg—The Florid Style—Renaissance Gothic—Military and Civil Structures of the Middle Ages . 153

CHAPTER XII.

ITALIAN RENAISSANCE.

Pisa—The Leaning Tower—Florence—The Cathedral of Milan—Roman Palaces—St. Peter's at Rome 180

CHAPTER XIII.

FRENCH RENAISSANCE.

The old French Châteaux—Fontainebleau—The Louvre . . 207

CHAPTER XIV.

CLASSIC ART AND THE DECADENCE OF ARCHITECTURE.

Versailles—The Palais-Royal—The Bourse—The Madeleine—New Opera House 230

CHAPTER XV.

ENGLISH ARCHITECTURE.

Stonehenge—Westminster and Melrose Abbeys—Pontefract Castle—Holyrood Palace 239

LIST OF ILLUSTRATIONS.

PAGE

1. The Temple of Neptune at Pæstum, . . Frontispiece.
2. The Pillars of Karnac, ... 4
3. The Merchant's Tables at Lochmariaker, ... 7
4. Ruins at Mycenæ: 1. Tomb of Atreus. 2. Gate of the Lions, 15
5. Karnak (Egypt), ... 26
6. Khorsabad—Assyrian Temple Restored, ... 33
7. Temples of Ellora, ... 40
8. The Parthenon, from a photograph, ... 49
9. The Temple of Pandrosa, ... 52
10. The Temple of Neptune at Pæstum, from a photograph, . 57
11. The Colosseum at Rome, from a photograph, ... 67
12. Ruins of the Baths of Caracalla, from a photograph, . . 71
13. The Pantheon at Rome, ... 75
14. Trajan's Column at Rome, ... 79
15. The Square House of Nîmes, ... 86
16. Roman Gate at Trèves, ... 87
17. The Arena of Nîmes, ... 90
18. The Amphitheatre of Arles, ... 92
19. The Pont du Gard, ... 96
20. Interior of St. Sophia at Constantinople 109
21. Cathedral of Angoulême, ... 116
22. A View in the Alhambra, ... 123
23. Interior of the Mosque of Cordova, ... 127
24. The Cathedral at Spires, ... 139
25. Crypt of St. Eutrope de Saintes, ... 142
26. Cathedral of Puy, ... 145
27. Notre Dame de Poitiers 149
28. Western Door of the Cathedral of Mans, ... 151

PAGE
29. The Cathedral of Chartres, ... 157
30. The Cathedral of Bourges, ... 160
31. The Cathedral of Rheims, ... 161
32. The Cathedral of Strasbourg, ... 163
33. Interior of St. Etienne de Metz at Paris, ... 169
34. Walls of Carcassonne, ... 174
35. Ruins of Coucy, ... 178
36. Interior of the Cathedral of Sienna, ... 185
37. The Vatican and St. Peter's at Rome, ... 194
38. The Front of St. Peter's, ... 197
39. Interior of St. Peter's, ... 201
40. Val de Grâce, ... 203
41. The Château of Blois, ... 206
42. The Château of Chenonceaux, ... 209
43. The Château of Chambord, ... 213
44. The Porte Dorée of the Château of Fontainebleau, . . . 215
45. Gallery of Francis I. at Fontainebleau, ... 216
46. Court and Dauphin Gate, ... 218
47. The Louvre, ... 221
48. Colonnade of the Louvre, ... 223
49. Richelieu Pavilion of the Louvre, ... 226
50. The Turgot Pavilion (New Louvre), ... 228
51. Viaduct of Chaumont, ... 233
52. Windsor Castle, ... 240
53. Opera House at Paris, ... 236
54. Stonehenge (restored), ... 242
55. Guild Hall. 246
56. Westminster Abbey, ... 249
57. Pontefract Castle, ... 253
58. Norwich Castle, ... 254
59. Melrose Abbey, ... 256
60. Holyrood House, ... 260

Univ. of California

WONDERS
OF
ARCHITECTURE.

CHAPTER I.

CELTIC MONUMENTS.

On misty days, when sea and sky blend together on the grey horizon, a fitting spot for contemplation is the eastern extremity of the peninsula of Croisic—a strip of bleak and unproductive land, which to the imagination looks like the world's end, so far does it stretch its low-lying and narrow tongue into the solitary seas. In that remote spot, a simple stone of unpretending dimensions raises its head from a gentle eminence, above purple granite rocks, beaten by the restless waves. Surrounded by soothing influences, and unheedful of the passing hours, the reflective mind may there indulge in reveries of the past, under the shadow of this silent witness of the ancient times. Fancy, conjuring up visions of what has departed, may there picture once again the Druids and their strange life—see them, with their long beards and their oaken wreaths, performing their mysterious rites, and hear the song of the gentle priestesses, sweeping past in picturesque procession, armed with their golden sickles.

Of all ancient architectural remains, this stone of Croisic is perhaps the most insignificant, its proportions being very

small compared with some that may be mentioned. The great stone of Lochmariaker, for instance, is 70 feet in height—an altitude as great as that of the Egyptian obelisks. Originally it formed one complete and imposing monumental pillar, but it is now overturned and broken into four pieces.

Another pillar belonging to the same category, situated between Nantes and Larochelle, was still higher. That of Plouarzel, again, upon the highest point of Bas-Leon (Finisterre), is 36 feet above the level of the earth. It is of unwrought granite, its surface is covered with lichens and mosses, and it is of a form nearly quadrangular. Upon two of its opposite sides a kind of bas-relief has been sculptured by a rude hand, which still is venerated by the peasantry of the country. This carving represents the cosmogonic egg of the great mythical dragon, the supposed source of all existing things, and is emblematic of the world, says Mr. Henry Martin. The same figure is to be traced upon other monuments.

The upright stones which are to be found in France, England, ancient Germany, Scandinavia, Russia, Siberia, China, Thrace, Northern Africa, and even in the New World, are known by different names. In Brittany and the departments of Western France, where they abound, they are called *men-hirs* or long stones, or stone pillars. They were often employed to mark the burial-place of persons whose memory it was desired to commemorate; they were frequently monumental in their character, having been erected merely to commemorate some notable event; and occasionally they were purely religious in their signification.

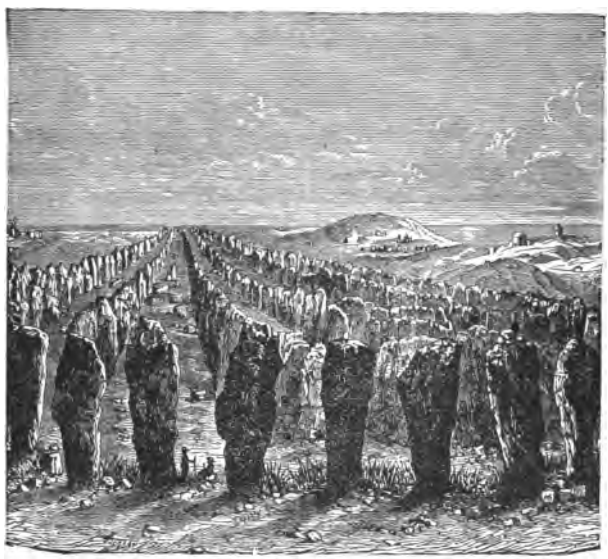
Not unfrequently these gigantic stones are found grouped around a central pillar of more than the usual height, and

form what are called *cromleehs* or sacred circles. These circles were in ancient times used as temples and assembly halls. Sometimes the cromlechs surrounded tumuli in which the dead were deposited, the idea having evidently been to place the tombs within the consecrated enclosure. Again, instances are found of two or three cromlechs grouped together surrounded by stone pillars arranged in straight or curved lines; and in certain cases the stones bear evidence of having passed through the workman's hands. They are arranged in thriliths, each of which, as the name signifies, consisting of three stones, two of which are upright pillars supporting a third, which forms a kind of architrave, uniting the two pillars by the help of mortices and bolts rudely ornamented.

This arrangement, unknown in France, probably existed at Abury, and is still to be seen at Stonehenge, in what is known as the *Cor-Gawr* or Dance of Giants, the original plan of which can be easily made out from the remains. This Cor-Gawr consists of two circles and two ovoids, the one within the other, and is 300 feet in circumference. The thriliths of the inner circle measure 30 feet high by about 8 feet wide.

Combinations of stone pillars, which do not of themselves form enclosed figures, go by the simple name of *lines*. Morbihan possesses admirable examples of these, the most beautiful of them being the Lines of Carnac, near the sea. In spite of the ravages of time, there still remain 1,200 upright stones, ranged in distinct order, and easily distinguishable from the other monumental remains spread over the district. Here must have existed an immense temple, upwards of a mile in length, where the Druidic ceremonies were solemnised. The broken obelisks stand with their smaller

ends in the ground, and many of them are 18 feet in height, though a considerable number rise to only 3 feet. They are arranged in eleven parallel rows, forming ten avenues leading towards a semi-circle, which formed the sanctuary or inner temple of the enclosure.



The Pillars of Carnac.

Celtic architecture is not restricted to stone pillars-indeed, these can hardly be said to belong to architecture at all. Different from these pillars is the dolmen or stone table, which has received a number of names, such as broad stone, covered stone, devil's table, fairy's table, and, in the Breton language, home of the fairies. The simplest dolmens con-

sist of three stones—two placed upright, and one broad horizontal slab supported by the other two. Very often there are four or more stones ornamented at one end and forming a grotto. Sometimes there are two or three tables supported by a dozen upright stones of great size. The demi-dolmen, raised only at one end, presents a sloping surface.

The dolmen may be said to resemble the monuments of rough stones which Arrian says he saw in Asia Minor, and also those of which Calpurnius speaks in one of his Eclogues. Strabo, the celebrated geographer, whilst travelling in Egypt, encountered some temples of Mercury composed of two rough stones sustaining a third, in all of which could be traced the main features and characteristics of the dolmen, or stone table.

Dolmens, however, were generally tombs, not temples—places of burial and not places of worship, as they have been long believed to be. Celtic altars do not appear to have taken the form of chambers or grottos. The greater number of those which can now be identified consist either of a table placed upon one or two blocks, or of a shapeless slab supported by others of a like character. The stone-basins, of which much has been written, belong to this category. Antiquaries have eagerly searched these basins, in hopes of discovering the grooves in which ran the blood of the sacrificed victim. Cornwall enjoys the distinction of possessing the giant of the dolmens, a memorial structure crowned with basins, the largest of which has a radius of 3 feet. The table itself, placed upon two natural rocks of low elevation, measures about 40 feet long, 20 feet wide, and 16 feet thick, and weighs upwards of 700 tons. These, surely, are proportions worthy of a true dolmen.

More extraordinary still, some altars have been found which have a hollow carved in them exactly the shape of the human body. In this hollow, as in a mould, the body of the victim was laid. Upon the tables of many dolmens, among others the celebrated Merchants' Tables, at Lochmariaker, can still be recognised the form of a hatchet or mason's trowel traced upon the stone. This was a symbol that was very common in primitive times. During the Roman era, trowels were found pictured upon monuments, with the inscription *Sub ascia* written beneath. The expression was meant to signify that the monument was yet under the trowel—devoted to the purposes of a tomb; the device, it is supposed, being resorted to in order to protect empty sepulchres from injury.

Dolmens, or burial grottos, have in some instances groves or covered walks attached to them, which form avenues leading up to them. In the diocese of Munster, in Prussia, there is an alley of this kind where a hundred sheep can find shelter. Near Saumur, in France, another specimen exists in the shape of an entire gallery 55 feet long, and 6 feet high, the width being about 14 feet. Each of its huge sides is formed of four stones, the floor is composed of a single slab, and all of them are inclined towards the interior. Four stones also compose the roof, and one of them, split up through its whole length, is sustained by a single pillar. Such figures and measurements speak for themselves.

The longest of these covered avenues is at Esse (Ille et Vilaine), and the most curious near Lochmariaker, in the little isle of Gavrinnis. Twenty-three upright stones placed together range themselves in walls under ten enormous slabs. Everywhere at Gavrinnis extend parallel lines, oval or

The Merchant's Tables at Lochmariaker.

UNIV. OF
CALIFORNIA

semi-circular zigzags, fantastic labyrinths, and circles within circles, which it would be even more difficult to understand than to describe. Serpents, coins, and hatchet-heads can yet be distinctly traced among the carvings.

Numerous sculptures are everywhere to be found upon the Celtic monuments, but in this respect Gavrinnis is unquestionably the most remarkable. Those dolmens which have covered ways were, perhaps, in former times, always sunk under ground, beneath the artificial hillocks that covered the dead, and to which the Latin name tumulus is applied. Primitive architecture in the West seems in these cases to have achieved its last and highest effort. Walls are to be found made of stones placed the one above the other—vaults, transverse ways, lateral chapels, transepts—such remains, in fact, as we might find in the excavations of Egyptian burial-places. Both England and France possess curious specimens of ancient architectural art, that in their main features almost realise the principle upon which is based our modern system of construction. One of the most interesting is near Caen, at Fontenay-le-Marmion, where can be seen the remains of ten circular vaults from 12 to 15 feet in width, which communicate by galleries at the circumference of the tumulus. Human bones have been found here in parts of the soil that have been excavated.

All these monuments, stone pillars, cromlechs, lines, dolmens, covered ways, and tumuli are connected with an ancient religion to which the name Druidic has been given—a religion that adored supreme power in the midst of savage nature, amidst forests, waters, and rocks, and contained within itself elevated conceptions, combined with practices of an extraordinary and cruel kind. The introduction of the Latin deities into the countries of Western Europe

produced something like chaos in the religion of the Celts. Against Christianity the Druids held out defiantly for a long time. Councils of the Latin fathers were held, at which those who honoured trees, fountains, and stones were condemned, and these objects of superstitious regard were ordered to be destroyed. King Chilperic threatened those that failed to destroy the sacred relics with heavy punishment. Later, however, the difficulty was wisely overcome by consecrating the objects to which the people were much attached to the Christian worship; and when this was done the stone pillars were surrounded with crosses and ornamented with pious symbols. This procedure had, in course of time, the effect of uprooting the old Druidical system; but the custom, in its turn, gave rise to superstitions, perhaps more enlightened, but not less enormous. In the centre and west of France, even at the present day, are to be found substantial traces, under new forms, of the religious rites and ceremonies of primitive times. The devotions paid to what are supposed to be the patron deities of Fear and Disease, the votive offerings suspended from the branches of trees, and the belief in fairies and goblins which is still so widely spread among the lower classes of society, form part of the legacy which has been handed down from this period.

CHAPTER II.

PELASGIC AND ETRUSCAN MONUMENTS.

THE adventurous traveller advancing into the marshy, thickly-wooded lands, where lie buried the bones and the works of the Etruscans—solitudes which terrible fevers seem to guard from the intrusion of human curiosity—beholds, under the oaks and mountain olives, enormous stones ranged in the form of walls—astonishing vestiges of the work of man. Leaving out of view the tumuli which enclose specimens of vaulted chambers and of masonry, the Celtic monuments, strictly speaking, ought not to be included at all within the pale of architecture. But the case is far different with the Pelasgic and Etruscan relics. Standing in their midst, the beholder cannot fail to recognise that they are based upon the system of true architectural construction, the predominant characteristics of which are extreme simplicity and power. And, taking into account the enormous size of the stones, and the solidity with which they are fitted together without cement of any kind, so that time has not been able to displace them, he may well be tempted to think that degenerate man in these times has lost much of the power of his ancestors.

M. Petit-Radel, a Frenchman, enjoys the honour of having, at the commencement of the present century, discovered the Pelasgic monuments of Western Italy, and traced in them copies of those that were already known to exist in Tiryntha and Argos. His theory on the subject does not

seem to have been ever shaken. He fixes the period of the great Pelasgic movement between the twentieth and the fifteenth century before our era. The Pelasgi setting out from Asia at a time not determined, but without doubt at an epoch posterior to that of the Celts, appear to have traversed Asia Minor, leaving some settlement behind in Cappadocia. According to the opinion of ancient geographers, they peopled Ionia, Æolia, Caria, Thracia, Epirus, Macedonia, Thessalia, and overran all Greece. Gradually advancing either from one island to another, or crossing the mainland by way of Thracia and Illyria, they reached Etruria and the Roman States, and the wave of their emigration broke upon the coasts of France and Spain.

Of the structures which they reared in Asia, mention need only be made of the Acropolis of Sipylus. This temple formed a double enclosure, very well built with rectangular stones. Near the outer wall was a great tumulus 280 feet in extent, the base of which was surrounded by many-sided irregular stones, well fitted the one to the other. Access to the top was gained by means of a great stair, of which some steps still remain. This acropolis formed the tomb of Tantalus, son of Jupiter and King of Lydia, who died about 1410 before our era; at least, Pausanias speaks of having seen the grave of Tantalus at Sipylus.

Passing from Asia, Pelasgic ruins are seen to abound in ancient Argolis—a land famous for the adventures of Pelops, of Thyestes, and of Atreus; and for the assembly of the great Hellenic army under the command of Agamemnon. At Tirynthia, the town of Hercules, rises a powerful citadel which Pausanias has described, and which is fully 2,000 years old. Euripides has attributed its construction to the Cyclops,

the mythical blacksmiths. The enclosure is formed of many-sided blocks placed the one above the other without cement, smaller stones being placed between the larger ones to fill up the spaces and bind the structures more completely together. Extraordinary labour is said to have been expended upon the work, no second stone being laid until the one that had already been placed was firmly fixed; so that by slow and successive degrees a wall was at length made which even cannon-balls could only with difficulty destroy. The principal parts of this relic date from the eighteenth century before our era; but some portions of the wall, more regular in construction, were built in the fifteenth century before the Christian era.

Next in order may be noticed the acropolis at Mycenæ, the double enclosure of which presents three different styles of workmanship, corresponding without doubt to three successive epochs. Here are to be found in all directions irregular polygonal blocks of stone, some rough on the surface, others smooth and well jointed. The most ancient part of this structure, supposed to have been raised by Mycenas (1700 B.C.), is in limestone; but the more recent part, built by Perseus (1390 B.C.), is in puddingstone.

Entrance into the acropolis is obtained by the "Gate of the Lions." The blocks forming this are enormous in size, quadrangular and horizontal. They are 15 feet high and 9 feet broad, and the opening is surmounted by a huge lintel of which the three dimensions are 15 feet long, 6 feet broad, and 3 feet thick. A bas-relief, 7 feet high and 10 feet broad at the base, forms a sort of triangular pediment over the gate, within which are sculptured two lions standing on their hind-feet, resting their fore-paws upon a pillar placed between them, so as to face each other.

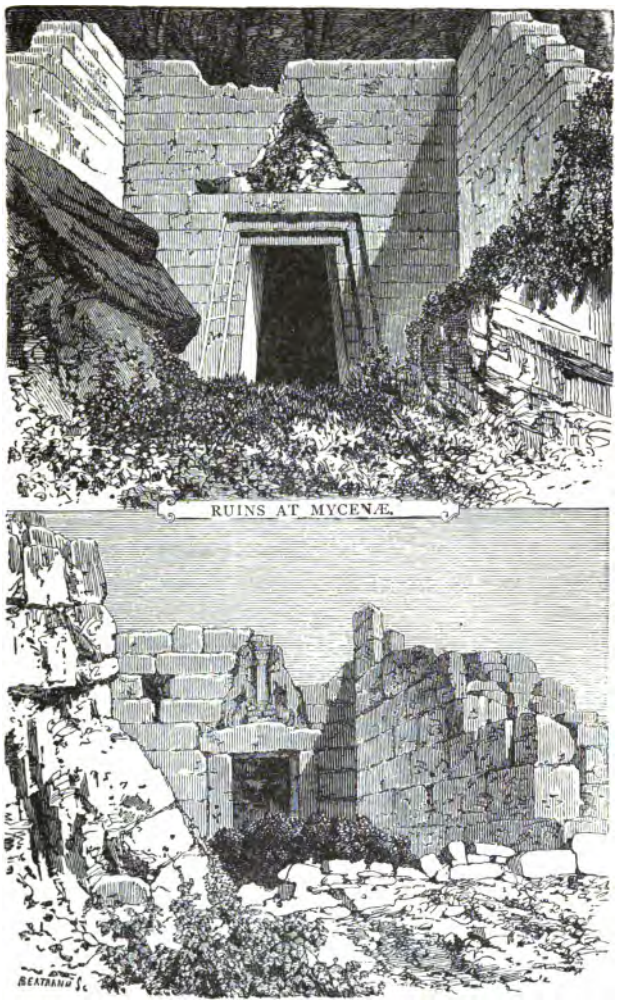
Their heads, which have been broken, formerly reached the height of the capital of the pillar. This pillar increases gradually in diameter from base to summit, and its capital is supported upon four discs, which are supposed to represent the billets of wood meant to maintain the sacred fire. An explanation of this latter fact is to be found in the pillar itself, which has the form of an altar.

This "Gate of the Lions" formed, as we have said, the chief entrance to the Acropolis. There were two others of which the smaller presented a triangular bay, formed by two stones inclined the one towards the other.

"There is still to be seen at Mycenæ," says Pausanias, "the fountain of Perseus, and the subterranean chambers where it is said Atreus and his children concealed their treasures. Near it is the tomb of Atreus and of all those whom Agamemnon brought back with him after the Trojan war, and whom Ægisthus destroyed at the feast which he gave them." Tradition points out a tumulus near the Acropolis as being the subterranean chamber in which Atreus kept his treasure. The façade of this chamber alone is visible, the vault itself being entered by a wide high door, the flat lintel of which is surmounted by an empty triangular space. Two mouldings ornament the architrave and the jambs. Of the two stones of the lintel, the largest must have weighed about 170 tons, seeing that in size it is nearly 210 cubic feet, and measures 26 feet long by 32 broad.

A long and wide passage, 60 feet by 18 feet, leads into a very large circular hall. All the courses in horizontal beds have been placed the one above the other, but projecting inwards. The angles, however, have been cut away, so that the wall from the foundation to the centre of the vault forms

UNIV. OF CALIFORNIA



Ruins at Mycenæ: 1. Tomb of Atreus. 2. Gate of the Lions

TO BE
RETURNED

a surface regularly curved. In this way a vault, bold in its outline, has been produced somewhat in the form of a bee-hive, the walls of which are 18 feet thick. Nothing obstructs the entrance to this subterraneous abode now, and no trace of iron-work, such as is used in the construction of gates or doors, has ever been found; but notwithstanding this, it is possible that high palisades were planted in the soil in front of the entrance, or that the latter was concealed by masses of earth heaped up before it, which was removed when circumstances rendered it necessary.

Among the forty-one Pelasgic monuments examined in Italy, those of Monte Circello, twenty miles from Rome, present a most picturesque appearance. They are placed on a mountain which, at seven different points, rises to the height of 1,500 feet above the sea. On the summit is the temple of Circe. Here is shown the tomb of Elpenor, one of the companions of Ulysses, whose figure Circe changed into that of a brute. It is a flattened cone, regularly formed of courses of quadrangular stones, and occupies a space of 39 square feet.

In the houses and in the churches also of Alatri can be traced distinctly three successive periods. The Pelasgic has become Roman, and the Roman has become in turn Christian; but the original character still remains. St. Peter has only taken the place of the god Faunus. The Pelasgic epoch has preserved its aspect and character intact in a square *Lupercal*, dedicated to Pan, and more especially in certain gates that are surmounted by enormous lintels. Upon one of the architraves of the Acropolis are seen emblematic sculptures; also in different places there are three very distinct figures of Pan, Hermes, and Faunus.

At Cervetri or Cære again, the capital of the ancient King

Mezence, there has been discovered a very large tomb, or rather a tumulus covered by another tumulus, where five burial chambers abut upon two very long and narrow halls, vaulted in the corbelling fashion, and pierced with elliptical excavations. In one of these halls a chariot, and also some arms, vases, and small graven figures, were found to have been placed beside the bronze bed upon which it was the custom to put the dead. The excavations that have been cut in the rock are of comparatively recent origin, and containing as they were found to do cinerary urns, in which the ashes of the dead were deposited, the deduction may be drawn that even at a very remote period the influence of Greek and Latin customs had begun to be felt.

CHAPTER III.

EGYPT.

On either bank of the Nile ancient Egypt accumulated temples, palaces, and tombs, the vastness of whose ruins proves that a mighty civilisation existed upon the earth at a time when the Persians and Greeks herded their flocks on the shore of the Caspian Sea. Everybody has heard of the pyramids, from the summit of which "forty centuries look down upon you." Napoleon would have been more accurate had he said sixty, for their average age may be set down at 4,000 years dating from before Christ. These marvellous structures are said to have been erected by three kings of the fourth dynasty—Cheops, Cephrenes, and Marinus. A hundred thousand men, who relieved each other in relays every three months, were employed for thirty years in excavating the tomb of Cheops in the rock, and covering it with a mountain of masonry which measures 470 feet in height by 570 feet in breadth. Built wholly of perfectly adjusted stones of the dimensions of thirty feet, the Great Pyramid rises to its summit by regular steps or gradations. Formerly it was covered by a reddish coating to which Herodotus refers, and its surface quite swarmed with inscriptions. The blocks composing it were smooth as a mirror, and its lofty and narrow point seemed to pierce the sky; but at the present day its summit is terminated by a flat surface, created by the ravages of time.

Situated two leagues from the Nile, and about the same

distance from Cairo, upon the exterior elevations of the Lybian chain of hills, the pyramids tower over all the surrounding country. They can be seen from a great distance, and the traveller journeying towards them imagines every moment that he is on the point of arriving at their base, but like the mirage they seem to recede as he advances. "At length, however, they are reached," says Volney, "and nothing can express the variety of sensations which they provoke. The height of their summit, the steepness of their slope, the vastness of their surface, their tremendous weight, the memory of the times they have outlived, and, above all, the reflection that these mountains of masonry have been reared by petty and insignificant man, who creeps at their feet—all impress the beholder, and fill at once the heart and the mind with astonishment, terror, humiliation, admiration, and respect."

Profound as is the impression created at the foot of the pyramid—where the spectator, face to face with the enormous mass, loses the full view of the angles and the summit—it is only after ascending to the top that he obtains a just idea of the whole, and finds expectation eclipsed by reality. From the summit the eye might traverse a distance of thirty-six miles, were the human vision capable of distinguishing objects so far away. A stone thrown with the greatest possible force does not clear the base, but usually falls upon some of the lower steps. Owing to a common optical illusion, he who casts the stone imagines that he has sent his missile to a great distance; but, as the eye follows it, the stone seems to turn back and it falls only at the foot of the vast structure.

The interior of the Great Pyramid seems to be full. Only one long gallery, smaller in proportion than the

burrowed passage of a mole under a hillock, has been discovered. A small opening, at the height of 45 feet above the base, gives access into a succession of obscure passages. Here locomotion is tedious and dangerous, the cold extreme, and the air thick and stifling. The traveller is compelled to advance in a stooping position, placing his feet as he goes upon narrow ledges which overhang a black abyss. This perilous path is succeeded by a low gallery, where he has to creep along a steep slope, and that in turn by a well without a parapet, which it is necessary to cross. Finally, pushed, dragged, carried on stout shoulders, the adventurous explorer succeeds in traversing the chamber called the Queen's Room, and arrives at the King's Hall. Nor is the return less difficult; and when at last the traveller once more emerges into daylight, it is in a state of complete exhaustion.

It is customary to shout aloud, and even to fire off muskets in this subterranean quarter, in order to produce an echo, the reverberation of the pyramids being celebrated for the sound repeating itself no less than ten times. This echo owes its strength and its purity to the perfection of the ceilings and the points. The whole of the King's Chamber is wrought out of granite exquisitely polished, and the ceiling is formed of nine stones, each of which must be about 2,000 lbs. in weight.

But the King's and Queen's Chambers, which are only from 16 to 32 feet wide, form quite an insignificant abode for such a formidable roof as that of the Great Pyramid which covers them. Can it be possible that there are not other spaces above and below these small rooms, or is it possible to conceive that this huge pyramid was piled up simply to contain two such chambers? Where

ends the abyss along which the explorer travels? Where would the well lead to if some bold spirit should suspend himself in it at the end of a rope? Perhaps to that subterranean spot where Herodotus believed Cheops to lie interred. Diligent searches in the interior of this colossus might yet reveal much, for it is well known with what care the Egyptians concealed their places of sepulture.

Three hundred feet in front of the Great Pyramid may be seen the mysterious Sphinx, the head of which is 27 feet high. This strange figure is carved out of the rock: it is sunk in the sand up to the shoulders, and has been partly eaten away by time, for its nose and lips are both broken.

Squat as the figure at first sight appears to be, it yet rises to the height of 75 feet above its natural base. Westwards from this extends, in four ranks, an almost endless number of rectangular and oblong constructions, perfectly equal, and covering an area not less than that of the Great Pyramid itself. A rampart of smaller and ruinous pyramids surrounds the pyramid of Cheops on the south and east. Might not this have been the necropolis of Memphis, that great city, sacred and royal, the rise of which is now marked by a palm-grove?

Hundreds of miles south of the pyramids, where the valley of the Nile opens out, lie the ruins of Thebes, the ancient rival of Memphis—Thebes with the Hundred Gates, as it was named by Homer. These vast ruins still overrun the lower slopes of the western mountains towards the gorges of Biban-el-Molouk, where are the sepulchres of the kings. Medinet on the left bank, Gournah, Luxor, and Karnak on the right, form a majestic collection of architectural remains, which the army of Desaix beholding, saluted with enthusiasm. Desolation reigns in the whole of this vast space, if a few

villages or hamlets are excepted, the huts of which are miserable, the streets narrow, and the mud walls built upon rubbish. The whole place, in its relation to the extinct cities, is suggesive of unhealthy weeds growing around the feet of ancient oaks.

The palace of Karnak, which is the first great ruin seen on the right bank of the Nile, originally covered an area of 270 acres enclosed within a wall of unbaked bricks. This wall is still visible in parts, though what remains is not a tenth part of what has perished. Of these ruins the principal masses are grouped upon a straight line, which may be named the great axis, and which runs from north-west to south-east. This axis is cut by another line of architectural remains which runs from north to south, and consists of palaces and avenues of sphinxes. Upon the same bank, the remains of a vast staircase and numerous fragments of the sphinx and rams' heads show the site and dimensions of what was a magnificent avenue, terminated by two pylones—tapering square towers, of gigantic proportions. These pylones form the entrance to a court, surrounded by ruined temples, obstructed by the shafts of vast votive columns, among twelve of which only one remains upright.

Passing between two ruinous pylones and a propylone, a magnificent gate is reached, which would be a triumphal arch were it not that an architrave is found where the semi-circle should be.

All that has been described formed only the vestibule of the great hall, which has been named the Hypostyle, or the Hall of Columns.

A symmetrical forest of oaks and beeches ten centuries old would not give an adequate idea of its thirty parallel ranks of columns No tree, for instance, could attain the

diameter, or the height even, of the twelve great columns that form the axis of the hall. Twelve columns like the Monument on Fish Street Hill might give the reader some idea of the vastness of these pillars. The enormous monolith capitals—heavy enough, one would think, to crush any pillar—oppress the imagination with their size. A hundred men could stand on one of them without crowding. Never have greater masses of stone been laid than these. A few statistics may give some notion of the vastness of these ruins.

The hall itself is 422 feet long by 165 feet broad. The stones of the ceiling rest upon architraves supported by 134 columns, which are still standing, and of which the largest measures 10 feet in diameter, and more than 72 feet in height. Sesostris and his two predecessors constructed the Hall of Columns, and the date of its construction was about the fourteenth and thirteenth centuries before Christ.

Besides the ruins of the gallery or hall described, there are other pylones, another court with an obelisk, and the ruins of the gallery of the Colossi. Here is to be seen the largest obelisk in the whole of Egypt. It is over 90 feet in height; its sculptures are perfect in execution, and some are more beautiful than the perfected arts of Europe could even yet produce. At its feet lie the fragments of another obelisk which was a sort of pendant to it. Gazing on what he sees around, the imagination of the traveller, as it were, reconstructs the building, and setting upon their bases once more the sixty-two sculptured pillars in the form of giant caryatides, he begins to have some idea of the grandeur and vastness of the original.

Further on we come to a small temple in red granite, the site of which is rendered conspicuous by two obelisks.

UNIV. OF
CALIFORNIA

Karnak (Egypt).

This temple was richly ornamented, and contained two parallel ranges of chambers in which the priests lodged. It lies at the portico of the palace of Mœris. Three of the walls of this vestibule sustain thirty-two square pillars and twenty-four columns, and present to the gaze four ranks of persons, seated the one above the other. This is the most ancient portion of Karnak, and it is also the most mutilated. Courts full of rubbish, a chaos of columns and bassi-rilievi, are all that now remains of the palace of Mœris.

Three or four hundred miles to the north we next notice a large propylone, raised by the successors of Alexander, which an avenue covered with débris connects with the central mass. On the south, a majestic temple dedicated to the divinity Kons, also connected with the Hall of Columns, commanded a long road which is now lost in plantations of sugar-cane and palm-trees, but the direction of which can still be made out. This triumphal way was originally bordered throughout all its length with monolith sphinxes, no less than 112 having been counted within a space of 650 yards. Taking the total, there must have been 1,000 sphinxes, seeing that the road along which they were ranged was upwards of a mile long.

In ascending the Nile from Thebes to the first cataract, we pass numerous collections of ruins—Hermonthis, Esneh, Edfou, Com-Ombos, Philæ, Deboud, Kartas, Kalabché, Talmis, Dandour, Ghirch-Hussein, Pselcis, Maharakka, Seboua, Deer, Ibrim. At some distance from the cataracts of Ouadi-Alfa, the two temples of Ipsamboul are seen, worked out of the rock by the banks of the river, and forming wonderful caverns which will last as long as the world.

The greater temple, 143 feet long by 140 feet high, has in front of it four sitting statues, leaning with their backs

against the mountain of rock of which they form a part, and which are not less than 120 feet in height. Thirty-two seated figures decorate the cornice. There are a number of smaller figures in the interior, whose height is 25 feet. The walls are covered with enormous bassi-rilievi. Upon the altars of the three demi-gods Ammon, Phre, and Phta are found huge carvings representing Sesostris, the conqueror of Africa and Asia. His wife, Nofré-Ari, served as the model for the six colossal figures, 36 feet in height, which are ranged in front of the little temple dedicated to the goddess Hator. The severe gloom of these sanctuaries has been well described by Lamennais:—"A single thought," says he, "dominates Egypt—a grave and sad thought, not to be driven away, and which, from Pharaoh surrounded with the splendour of the throne to the humblest of his labourers, weighs upon man, preoccupies him incessantly, possesses him entirely: this thought is the thought of death. This people, seeing time gliding onward like the waters of the great river that traverses their naked plains, were led to believe that what passes so quickly is unreal and evanescent; and regarding the present life as fleeting and unsatisfactory, they were prompted by their faith, by their desires and aspirations, to look forward to a life that is permanent and immutable. Existence, in the estimation of the Egyptian, commenced at the tomb—and that which preceded death was only a shadow—a fleeting image. Thus his religious conceptions, his philosophical speculations, his dogmas, all tended in the direction of this great mystery of death, and his temple became a sepulchre."

CHAPTER IV.

ASIATIC ARCHITECTURE.

THE Temple of Jerusalem, built by Solomon about the tenth century before our era, reconstructed by Esdras in the time of Cyrus, and ruined by Titus, was a triple edifice; being at once a place of assembly for the people, a dwelling-place for the Levites, and a place of worship wherein the high priest officiated. In the centre was the temple, properly so called; around it were the courts of the priests; and on the outside the courts of the people, together with the galleries for strangers and proselytes. The people dared not penetrate within the second wall; the priests were excluded from certain parts of the central portion of the temple; and the high priest alone and that only once a year, might pass within the veil to the Holy of Holies, and contemplate the ark of the covenant face to face.

The temple was situated upon Mount Moriah and overlooked Jerusalem. A combination of walls and colonnades, it seems, like all the Phœnician and Jewish structures, to have excelled more on account of the richness of its decorations than its architectural merits. Precious metals were profusely used in its ornamentation. Josephus, who saw it in all its glory in the first century of our era, has described with pride its ceilings of polished cedar, enriched with gilded leaves; its columns of bronze, 18 cubits high; its cornices also of bronze, sculptured with lilies and pomegranates; its wonderful doors of cedar, enriched with

gold and silver; and its magnificent curtains of linen, embroidered with purple and scarlet.

The central part of the temple, intended for the accommodation of the high priest and the priests engaged in sacrifices, was 60 cubits long by 20 wide, and presented three tiers or storeys, rising above each other, surrounded by galleries and small chambers. Its height was equal to its length. A vast portico, access to which was gained from the east side, surrounded this lofty and splendid building. Both tradition and the Bible attribute the construction and furnishing of the temple to a great Tyrian artist, named Adoniram, who was at once its architect, sculptor, and builder.

Perhaps an inexact idea will not be given of the Jewish structures if they are likened to the monuments left by other nations descended, like the Hebrews, from the Semitic stock, and who were continually mixed up the one with the other, either as enemies or oppressors.

Nineveh and Babylon were the immediate predecessors of Tyre and Jerusalem.

Nineveh, the ancient capital of Assyria, is said to have been founded by a legendary chief named Assur. Historians, however, declare that it is the town of Ninus or Ninias. At a period even earlier than Babylon the people of this city were the victorious enemies of the Jews. On a bas-relief still in existence can be recognised King Jehu of Israel, who was a tributary of the kings of Assyria.

The inspired writers of the Bible speak with terror of Sargon, Sennacherib, and Salmanazar. Jonas, the Hebrew prophet, no doubt made prisoner in some invasion, went about the streets of Nineveh crying, "Yet forty days, and Nineveh shall be destroyed!" Enervating luxury, the weak-

ness of the kings, and the hostility of powerful Babylon combined to bring ruin upon this immense town. Besieged, taken, and sacked in 625 B.C., but still known in the time of Tacitus, who mentions its capture in the time of Claudius, 49 A.D., it was at length so completely effaced from the earth, that till the year 1842 even its site remained all but unknown. According to Diodorus of Sicily, the city wall measured 18 leagues, was 95 feet high, and was flanked with gigantic towers. It contained 600,000 inhabitants.

Long buried from human sight, its glory was, after many centuries, exhumed as it were and brought to light. A Frenchman, M. Botta, discovered at Khorsabad the palace of Sargon, of which the Asiatic Journal gave a full description; and some years after, Mr. Layard, in digging in the Hill of Nimrod, came upon the dwellings of Sardanapalus and Salmanazar. With the bassi-rilievi, and the inscriptions to which it is supposed the key has been found, it may be possible to reconstruct a civilisation that has disappeared, and to reinvest the heroes of that land with the environments in which they lived, moved, and had their being.

M. Botta commenced his researches in 1842, and the French government published the results in a magnificent work, illustrated from designs by M. Eugène Flandin. Funds, voted under the republican government of 1848, permitted M. Place, M. Botta's successor, to continue the researches. The result was that to the fourteen chambers already explored he added 134 more. Among these were thirty-two courts or esplanades, of which the following is the general plan of distribution:—

1. The residence of the king, embracing chambers ornamented with bassi-rilievi. 2. The offices, whose principal court, upwards of two acres in extent, communicated

with the kitchens, stables, cellars, and the magazines, in which have been found 100 tons of instruments and iron tools. 3. The harem, the dwelling of the women, with all the furniture proper for this purpose. 4. The observatory, a square block of seven storeys, painted in various colours, and more than 120 feet high.

The king's palace at Khorsabad, with its vast offices and outhouses, was like the citadel of a great town. Explorations have resulted in the discovery of the wall of the enclosure. It was quadrangular in shape, about 80 feet thick; 150 towers were placed along it at regular intervals; and it covered a space of two leagues.

The seven gates of the town have been exhumed, of which three—veritable triumphal arches—are adorned with sculptures.

It was the custom of the Assyrians to build vaults both in brick and in stone. One colonnade has been discovered of an entirely new species. The columns are distributed in groups of seven, and each of these groups is buttressed by a double pilaster. Another range of columns, grouped by sevens in the same manner, was covered with black mastic. One of the gates of the town, constructed of great hewn slabs of limestone, has preserved its arch, which can be seen in the form of a plain semicircle made of bricks, and resting on piers also built of bricks. This gate, reckoning from summit to base, is 20 feet high and 10 feet wide. The brick of which it has been built has been handled with the greatest skill and intelligence.

Large numbers of mounds, seen afar off on the left bank of the Tigris, opposite Mossoul, indicate with something like exactitude the immense space of ground occupied by Nineveh.

UNIV. OF
CALIFORNIA

Khorsabad—Assyrian Temple Restored.

UNIV. OF
CALIFORNIA

Babylon, the town of Nimrod, the mighty hunter, was but another Nineveh. Enormous masses of brick-work, covered with pictures in enamel; vast halls ornamented with bassi rilievi, and covered to the ceiling with cuneiform inscriptions relative to contemporary events; houses of three and four storeys; fifty streets parallel to or at right angles with the Euphrates, and fields sufficiently large to produce food for the inhabitants in time of siege—all this magnificence overtowered by the temple of Belus, the Hanging Gardens, and the ramparts—such, according to the historians, was Babylon, the city which was extolled and admired even by the founders themselves.

Daniel, who from a prisoner came to be chief minister in Babylon, has preserved for us the words of Nebuchadnezzar concerning it: "This is that great Babylon which I have made the seat of my empire, and which I have built in the grandeur of my power, and in the greatness of my glory."

The walls of this gigantic city were 390 feet high and 98 feet thick, and were flanked by two rows of towers, the one inside and the other outside the wall. Between the towers there was sufficient room for a four-horse chariot to turn easily. A ditch, wide and deep, banked with bricks and filled with water, surrounded the whole town. Twenty-six gates of massive brass gave ingress and egress on each of the four sides of the walls.

Perhaps the tower of the great temple of Belus was among the most remarkable monuments of Babylon. Eight gradually diminishing storeys gave it the look of a pyramid with enormous gradients. Upon the summit stood the temple, surmounted by a platform, where the priests assiduously devoted themselves to the study of the celestial bodies.

They believed that science was the supreme aim of man, and was the crown of religion. This temple was still in existence in the second century of our era.

A bridge, which Quintus Curtius, the historian of Alexander, ranks among the wonders of the East, united the two portions of the town on the respective banks of the Euphrates; and immense reservoirs received and turned aside the surplus waters during the time of floods. Finally, all antiquity has celebrated the praises of the Hanging Gardens, piled terrace above terrace, and supported by twenty large ramparts, crossed by conduits of water, and crowned by trees that gave them the appearance of a wooded hill.

Babylon had a long and a glorious career. Founded, says a respectable tradition, by Nimrod, the mighty hunter, who disputed the possession of Chaldea with the lions and wild bulls, it was occupied at a very early date by the Arabs, or at least by those migratory nomads and shepherds who wandered about this time over the north of Egypt. Belus, King of Nineveh, captured the town, but did not injure its prosperity; on the contrary, he embellished and strengthened it. Regaining its independence after the fall of Sardanapalus, it became the capital of a powerful kingdom, and one of its earliest sovereigns, Nabonassar, inaugurated an era which bears his name, 747 B.C. When Nebuchadnezzar took Nineveh and destroyed it, 625 B.C., Babylon became the most powerful and dominant city then existing, and received the name of Queen of the East. Powerful, and without a rival, it held in subjection the regions of Bactria, Armenia, Media, Persia, Phœnicia, and India. Cyrus, King of Persia, after a siege of two whole years, made himself master of Babylon by a bold stratagem, and assumed the title of

King of Kings. He it was who reduced the walls of the town to half their height. Darius, one of his successors, carried away the gates of brass, after a revolt. Alexander, on the return of his expedition from India, made a triumphal entry into the city, and died there at the very time he was resolving upon making it his capital. Soon after, weakened by the neighbouring town of Seleucia, on the Tigris, it rapidly fell, although in the first century of our era it was still inhabited.

At the present day, according to an observant traveller, the plain of Babylon is covered to the extent of eighteen leagues with débris, mounds, aqueducts, canals, and rubbish-heaps. All these have been so intermingled that it is difficult to recognise the sites or the dimensions of even the largest buildings. Desolation bears undisputed reign around. Not a house, not a field, not a tree in leaf: the scene is completely deserted both by man and nature. Tigers, jackals, and serpents have taken up their abode in the ruins, and frequently the traveller is terrified by scenting the lion.

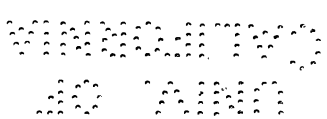
Alexander saved Babylon by proposing to make it his capital, but he destroyed a city not less famous, which also deserves to be ranked among the Marvels of Architecture. Persepolis, the holy city of the enemies of Greece, he was compelled to sacrifice to the fury of his army. He himself, it is said, in a fit of drunkenness set fire to the palace of the king. His companions in the debauch, and after them the common soldiers of the army, followed his example. "Thus," says Quintus Curtius, "perished the capital of the East—a city to which nations had come in search of laws—a city that was the birthplace of kings, and the terror of Greece in former times—a city that could send forth a

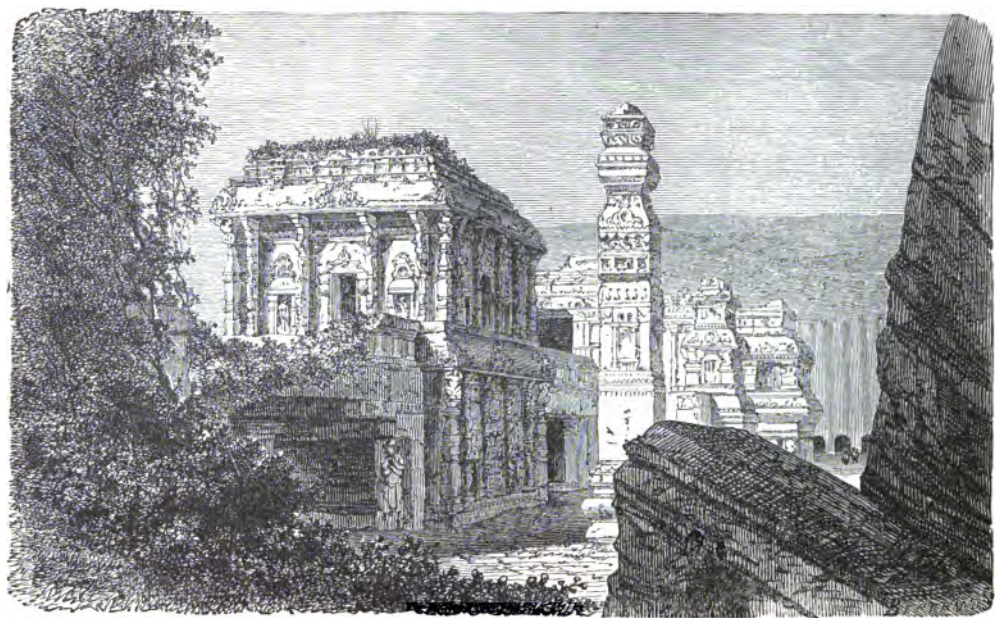
fleet of a thousand vessels, and armies that inundated Europe."

Istâkhr—the name by which Persepolis was known within comparatively recent times—occupies at the present day a space of between four and five miles in circumference, the mounds of which show how much the surface of the earth in this region has changed. Under the upper layer of vegetation antique masonry is still to be discovered. Alone in the midst of these remains rises a single upright column, with prostrate fragments lying around. This was the "town of the people," so named to distinguish it from "the city of the kings," where dwelt the monarchs. Crossing the canals and the marshes which intersect the plain, the traveller finds himself face to face with the most remarkable antiquities of the whole of Persia.

That portion of Persepolis known as the palace of the kings rises and extends over a long rampart, divided by a gigantic double flight of steps. Above is a great group of columns, which still support vestiges of their elegant capitals. On the left are massive pillars, on which are still to be seen the imposing colossal figures which formerly guarded the entrance to the royal dwelling. On the right is the palace in ruins; whilst afar off may be seen, through the spaces between the columns, masses of stone covered with symbolical figures; and yet farther off, through the bluish haze of the motionless atmosphere, hollow tombs excavated in the flank of the mountain which serves as a background of this imposing landscape.

Regarding the founders of Persepolis nothing is known. Cyrus and his successors dwelt for a long time at Babylon. The last kings of Persia preferred to stay at Susa and at Ecbatana. However, Persepolis remained the sacred city to





Temples of Ellora

which the kings came to be crowned. What Thebes was to Egypt that was to Persia—the metropolis of the nation, and the cradle of the enormous power which Greece eventually crushed. Thebes, it is said, was built by the gods; but if so, Persepolis was the work of the genii. We read in the "Book of the Kings"—a long epic poem, written in the tenth century of our era, and which contains a multitude of ancient legends—that Djemschid, the fourth king of the country, gave orders to the genii to mingle earth and water together and knead it into bricks for the building of the city.

Like Persia, the peninsula of India was occupied more than 1,000 years before our era by a nation whose language, ideas, and general character bear a striking resemblance to those of nations now inhabiting Western Europe. The Aryan race, as this people was called, have left behind them but a confused history. But the books and the monuments of which they were the authors, and which have survived many ages and frequent devastations, bear witness to their genius. Among the latter may be mentioned the sculptured caverns and temples of Ellora in the Deccan, which are justly ranked among the Marvels of Architecture. Their character is antique, but their date is uncertain; all that can be conjectured being that the more ancient portions of them belong to the ages before Christ. They are consecrated to several divinities of the Brahminic Pantheon.

The hills of Ellora extend a length of two miles in the form of a crescent, turning their hollow face to the west of the village of Rozah. Their flanks are pierced with subterranean galleries not less than two leagues in extent. Here is to be found a great hall, nearly square, which is 180 feet long, 150 feet broad, and 18 feet high. The roof is supported by twenty-eight columns. Certain of the excava-

tions disclose many storeys which communicate with each other.

What the visitor especially admires, however, is the temple of Kailasa, a magnificent jewel in stone, as large as the Royal Exchange of London, made of a single isolated rock, hollowed within and magnificently carved without. Nothing is wanting to render its proportions, its grace, and its beauty perfect. The hand of a master must have fashioned this gorgeous structure, which comprises chapels, porticoes, colonnades supported by figures of elephants, two basilisks 39 feet high, a pagoda 100 feet high, flights of stairs and galleries, made solemn with a dim and almost a religious light. The whole structure covers a space of 340 feet in length by 195 feet in breadth, and the exterior walls are separated from the cliff to which the rock originally belonged by an excavated passage 26 to 32 feet in width; so that this wonderful rock temple is completely isolated in the centre of a court hollowed out in the flank of the hill. Time, passing over the walls covered with innumerable statues, has blackened them, but in robbing them of much it has also imparted to them a real beauty. And here it may be remarked that the strange sculptures of Ellora are only to be compared to the shapeless works of our middle ages; and though they are wanting in the repose of the Egyptian sculptures, they seem to live and breathe with a monstrous life.

CHAPTER V.

GREEK ART.—I. ATHENS.

ALL the elements of Greek art can be traced in the architecture of Egypt, Assyria, and Persia. Eastern traditions and the tuition of Egypt had undoubtedly an influence upon the architects of Sicyon and Pæstum; but in this, as in all other instances, it is found that the character of architecture is modified by that of the people. What the Greeks chiefly strove after was the application of architecture to the wants and tastes of man. Their great secret was that they knew the range of human vision. By the simple combination of straight lines they achieved in architecture a grace, a harmony, and a great and prevailing sweetness. Their monuments resemble a man whom a rare combination of nobility of soul and perfect health of body elevates above his fellows. With none but ordinary proportions they create within us the sentiment of majesty.

Before describing some of the masterpieces which have been destroyed or disfigured by successive devastations, it is necessary to refer at least to the salient points of the three orders of architecture transmitted by the Greeks to the Romans, and which we discern again among the peoples of Western Europe—the pupils and heirs of antiquity.

The Doric order, the most ancient, the most simple, and perhaps the noblest of all, seems to have been a reproduction in stone or in marble of the structures which the Hellenes, while yet barbarians, built—not without a certain grace—

of the beams furnished by the Thessalian forests. Short, stumpy columns, thick at the bottom, generally lightened by flutings which softened their massive and somewhat clumsy look, rest without base upon a continuous sub-basement. The capital, austere and without ornamentation, supports a large flat stone called the architrave, also bare and unornamented. The extremities of the transversal joists and the spaces which separate them, have given birth to triglyphs and metopes, the attributes of the Doric frieze; only the spaces are filled up and the metopes are covered with votive shields, trophies, and bassi-rilievi. Above the frieze projects a cornice of stern and simple outline, which sustains the pediment.

The Ionic order, applied at first to the decoration of tombs, is more extended than the former; adds to its columns a base, which varies in dimensions; divides its architrave into three plat-bands; suppresses the triglyphs and metopes of the frieze, and enriches the cornice. This order draws its distinctive character from the form of its pillar-capitals, which are truly very beautiful. In shape the capital is oblong, and is formed by a sort of scroll, which curves outward, and falls in a large volute at both extremities.

Still richer is the Corinthian capital, which belongs to the third order of Grecian architecture. It is a double corbel of the leaves of the acanthus, which throw out eight small and eight large volutes, intended to sustain an abacus, curved at its angles and hollowed out on its sides. The whole order is in keeping with the capital. The base of the column is higher and bolder; the architrave is ornamented with rows of beads; the frieze is flowing and richly carved; and the cornice is so developed as to combine the three orders, for the purpose of increased embellishment.

It is supposed that the Corinthian order, much later than the two others, was invented at Corinth by the architect Callimachus. Few examples of it are now seen in Greece. Perhaps the Romans, who were very fond of it, transported to Rome all the capitals and columns which they could find in the original country.

Having premised thus much, let us glance at Athens, the city of Themistocles, of Cimon, and of Pericles. Full of gratitude towards the mother of arts and sciences, the instructress of Rome and the world, the ideal country of genius and mind, let us, as it were, seek the remains of her past splendour as an affectionate son searches beneath the wrinkles of his mother's face for that youthful beauty and those beloved lineaments which are the first to impress themselves upon his memory.

A little investigation enables the explorer to trace the still visible foundations of the long rampart built by Themistocles to connect the town with the Piræus. Passing under the lofty rampart, and under the black rocks which serve as the base of the Parthenon, our attention is first directed to the Acropolis. Neither at Corinth nor at Eleusis can the Propylæum be compared with the magnificent vestibule of this structure. It is the work of Menesicles; it was raised about 457 B.C., and cost an immense sum of money. In spite of the barbarous treatment which it met with at the hands of the Turks, the original structure may be still admired. Six columns sustain the pediments, and form the middle of the façade; five doors are placed in the spaces between the columns, and richly-sculptured compartments divide the white marble ceiling.

The grand flight of steps of the long Propylæum is on the right. A high rampart serves as the basement for

the little temple of the Wingless Victory, demolished in 1687 by the Turks, in order to give place to a battery, and afterwards built up again, stone by stone, by two German architects. Athens dedicated it to her divine protectress, Athena, or Minerva. The friezes represented the combats in which this goddess assured victory to her people, and upon the balustrade the Victories, her winged messengers, seemed to await her orders.

The whole edifice is constructed of marble, the bases of the columns being composed of single stones. The bassi-rilievi of the south and west were taken away, and transported to England by Lord Elgin, and now form what are called the Elgin Marbles in the British Museum. Small and ruined as it is, this temple, with the interior of the vestibule of the Propylæum, forms one of the most ancient examples of the Ionic order. It is attributed, with some authority, to the era of Cimon, the predecessor of Pericles. The orator Lycurgus afterwards added the decoration of the balustrade.

These interesting relics, which have initiated us into the pure beauty of the Grecian architecture, appropriately prepare us for an examination of the Parthenon, which travellers and artists have unanimously placed at the summit of architectural art, as Ictinus and Phidias placed it at the summit of the Acropolis of Athens. "The appearance of the Parthenon," says Lamartine, "testifies more loudly than history itself to the greatness of this people. Pericles will never die! What a civilisation was that which found a great man to decree, an architect to conceive, a sculptor to adorn, statuaries to execute, workmen to carve, and a people to pay for and maintain such an edifice! In the midst of the ruins which once were Athens, and which the cannon of the Greeks and Turks have pulverised and scattered through-

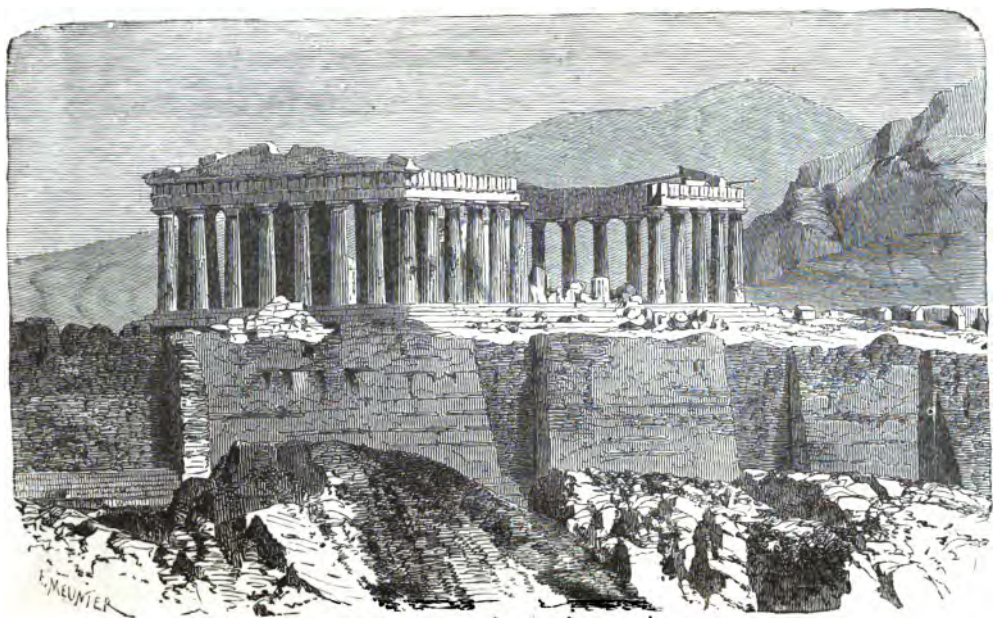
out the valley, and upon the two hills on which extends the city of Minerva, a mountain is seen towering up perpendicularly on all sides. Enormous ramparts surround it; built at their base with fragments of white marble, higher up with the débris of friezes and antique columns, they terminate in some parts with Venetian battlements. This mountain seems to be a magnificent pedestal cut by the gods themselves, whereon to seat their altars." Here it was that the Parthenon towered—nay, towers still, even in its ruins, above the Pentelic valleys, the plain of the Piræus, and the sea, where shine the pediments of the temple of Jupiter Æginus.

"By what fatality," exclaims Chateaubriand, "is it that these masterpieces of antiquity, which the moderns travel so far and undergo so many fatigues to behold and admire, owe partly to the moderns themselves their destruction? Down to the year 1687 the Parthenon remained entire. The Christians converted it first into a church, and the Turks, jealous of the Christians, afterwards converted it into a mosque. Then came the Venetians, in the highly civilised seventeenth century, and cannonaded the monuments of Pericles. They shot their balls upon the Propylæum and the temple of Minerva; a bomb sunk into the roof, set fire to a number of barrels of gunpowder inside, and demolished in part a building that did less honour to the false gods of the Greeks than to the genius of man. The town being taken, Morosini, with the design of embellishing Venice with the spoils of Athens, wished to take down the statues of the pediment of the Parthenon, and broke them. A modern succeeded in achieving (in the interest of the arts) the destruction which the Venetians had begun. Lord Elgin lost the merits of his commend-

able enterprises in ravaging the Parthenon. He wished to take away the bassi-rilievi of the frieze; in order to do so, he employed Turkish workmen, who broke the architrave, threw down the capitals, and smashed the cornice."

Numerous descriptions of the Parthenon, by writers of antiquity as well as travellers of all ages, enable us to re-construct it for the mind's eye in its general aspect, and almost in all its details.

The ancient sanctuary of Minerva had been so completely annihilated by the Persians of Xerxes, that Themistocles did not hesitate to employ the remains in the construction of ramparts. Pericles charged Ictinus and Callicrates, under the direction of Phidias, to raise a new edifice worthy of the power of Athens, and of her goddess. The architects adopted the Doric style, on account of its nobleness and simplicity; but they reserved the privilege to themselves of lightening its somewhat squat proportions, and softening its rudeness by precise and finished work. Inspired with the idea of the object of the work—the honour of Minerva herself—they never lost sight of the divine virgin, whose glorious image Phidias fixed in marble, as she sprang from the forehead of Jupiter—the issue of supreme thought—an ideal in which strength did not exclude grace. In every part of the architecture the highest degree of elegance and serenity was conspicuous. Without sacrificing any of the traditional merits of the Doric order, they subordinated them to the idea which it was necessary to embody. Columns of greater length than formerly supported bolder capitals and a lighter entablature; a richer and more delicate decoration was made use of in the friezes, and in the very smallest details the loftiest and most purely Attic spirit breathed.



The Parthenon, from a photograph

THE WIND
AUTOMATA

The temple, 234 feet by 98 feet, entirely of white Pentelic marble, was surrounded by a peristyle, sustained upon forty-six columns, eight supporting each pediment. The columns, placed without pedestals upon three steps, measured 20 feet high, and nearly 6½ feet in diameter. Forty-six to forty-eight colossal figures, about 13 feet in diameter, admirably grouped, formed the pediments, and were relieved in pure white upon a reddish background. Below, between the triglyphs, painted in blue, ran upon the ninety-two metopes of the exterior frieze those famous alti-rilievi, the Centaurs and the Lapithæ, Hercules and Theseus, Perseus and Bellerophon, by Phidias. Amidst the gods and heroes a place was reserved for men. The principal episodes of the battle of Marathon, won by the Athenians over the Persians, occupied the metopes of the western façade. Outside the colonnade, upon the exterior wall of the temple, ran a long frieze, embracing subjects treated in alto-rilievo, like cameos, and having a marvellous finish. There were religious processions coming from both sides at once to honour the figures of the gods upon the façade. In the sanctuary was a colossal Minerva, 46 feet in height, clothed in a tunic of gold, and holding a spear of ivory in her hand.

The Acropolis of Athens also contains the united temples of the Erechtheum of Minerva Poliades—"Great works also," says Lamartine, "but drowned in the shadow of the Parthenon." Mention may here be made of a small temple united to the Erechtheum, which presents a feature we have not hitherto noticed. The place of columns is in this instance supplied by statues. Six beautiful caryatides (figure-pillars) in white marble, and crowned with elegant capitals, support an entablature, lightened by having no

frieze. A heavy superincumbent weight would have given these figures a painful appearance of effort, than which there is nothing more foreign to Greek art. By the absence of this, however, and the skill of the designer, their expression is one of unequalled serenity blended with that cold dignity and geometric arrangement which is more

The Temple of Pandrosa.

characteristic of architecture than of statuary. Their arms are cut off between the shoulder and the elbow, and the straight folds of their garments, especially behind, look like the flutings of columns. Their feet rest upon a pedestal equally high in all cases. Modern art can hardly equal them even in the case of the splendid caryatides of the tribune of the Louvre, in which grace, size, and charming

naïveté are substituted for and supplement the astonishing nobleness and absolute purity of the feminine figure-columns that, in the small temple of Erechtheum, guard the celebrated olive—the tree and present of Minerva. This little temple was dedicated to the nymph Pandrosa, one of the daughters of Cecrops, and it is generally called the *Pandroseium.*

Among the numerous monuments, the traces, or at least the sites, of which we can still discover upon the soil of Athens, there are few so entire as the temple of Theseus—the most beautiful, after the Parthenon, which Greece has raised to her gods or her heroes. It is conceived in the same spirit, and presents a similar arrangement, to that great masterpiece. Combats of Centaurs and Lapithæ decorate the frieze. Its harmonious mass and its beautiful columns stand out clearly relieved against the deep sky of Attica, crowning, as it does, an isolated cliff, wild and bristling with sharp rocks. Like the Pecile and the theatre of Bacchus, it is a work of Cimon.

A little monument, formerly known under the name of the Lantern of Demosthenes, and of which a copy occupies at St. Cloud the summit of a tower well known to the Parisians, deserves attention as one of the rare specimens of the Corinthian order to be seen in Greece. It formed one of those small houses which were used to contain the tripods received by the victors in the scenic games—those same tripods which were on high occasions employed for the decoration of one of the thoroughfares of Athens, called in consequence the Street of the Tripods. Above a rectangular pedestal rose a small round chamber, closed by six marble panels, that crowned the frieze and circular cornice, and of which the joinings were concealed by six

fluted columns partly sunk into the wall, and rising to the height of 13 feet. The cupola, delicately carved in the upper part, where it imitated a roofing of laurel leaves, supported an ornament in the shape of a piece of flower-work, full of caprice, and very artistic in the management of the foliage. Here it was that the tripod was kept.

---

2. GREEK REMAINS IN ITALY AND ASIA.

Pæstum, the Poseidonia of the Greeks, owes its origin to the first Dorian immigrations into Italy. This celebrated structure was situated a short distance from the sea, and from the river Silarus. Its decline dates from three centuries before our era, though it existed still under the empire previously to its capture by the Saracens, who in 915 burned it before abandoning it to the Italians. In addition to three famous temples of which it was composed, there still remains a fragment of the ancient wall, formed of enormous blocks. On the space of four miles which these ruins cover, are to be found fragments of columns, of cornices, and of pools of water where now grow only coarse reeds—sad successors of the roses so much extolled by the ancient poets. In the low plain, where now are scattered the remains of this great temple, the soldiers of Crassus in former times crushed the almost invincible army of Spartacus. Even the dead have not fertilised this marshy tract of land. There is no appearance of life or of restless animation to disturb the solemn impression and the imposing effect of these old and solitary temples.

The smallest of the three temples has lost every trace of interior walls, and preserves only its stout Doric columns

and two pediments. Nine columns rear themselves in its front, and thirteen at the side, which show to great advantage when gilded by the sun of the South. Above the entablature rests a frieze with modules. There are still three columns standing in the inside, and broken shafts and débris encumber the enclosure.

Of the three temples of Pæstum, the best preserved ranks among the most beautiful works of antiquity, and is situated between the two others. Neptune was the god to whom it was dedicated. Its fluted columns, of which there are six on the façade and fourteen on the sides, rest upon three broad steps of most harmonious proportions. They are short, their height not being more than 14 feet. Their diameter gradually diminishes towards the top, and thus they present somewhat of the appearance of a pyramid. Between the columns the space is little more than the diameter of the pillars, and this helps to make the play of light and shade among them very striking and varied. The capitals spring boldly out, and the entablature is a little more than half the height of the columns. Below the capitals are four small fillets, fine and light ornaments, which are placed opposite each other, and give great delicacy to the ornamentation. Judging from what remains, a pretty correct estimate can even at the present day be formed of the arrangement of the sanctuary of the temple. It was ornamented with pilasters, and with two ranks of columns which supported an architrave on another range of columns of smaller size, destined to support the roof. Scarcely another example exists of this superposition of orders among the Greeks.

Sicily was at an early date colonised by the Dorians,

whose dialect it preserved. Notwithstanding the successive conquests which devastated it, it still contains architectural remains which are well worthy of the mother country, the most complete of which is the temple of Segesta.

The town of Egesta, or Segesta, the foundation of which is attributed to the fabulous Acestes, the companion of Æneas, was destroyed by the Saracens in the eleventh century. A temple, a theatre, and some shapeless débris situated at a short distance from Calatafimi, are all that now remain of it. Majestically based upon a promontory, as upon a great pedestal, the temple seems to have always been isolated from the town, which circumstance was, probably, the cause of its being preserved from the fury of the destroyers of the latter. Antiquarians do not agree as to whether it was consecrated to Ceres or to Diana. It has the form of a square, and is surrounded by thirty-six columns, its circumference being more than 500 feet. All the attributes of the Doric order are to be found in it. Columns without bases swelled out at the bottom, round capitals, an architrave, a frieze and a cornice, with triglyphs and metopes, a double pediment, and four steps at the spaces where the doors afforded entrance —such are the main features of the temple of Segesta. The columns are in calcareous tufa, and were doubtless originally coated with stucco. Indentations upon some of the stones, which were doubtless made in order to facilitate the transportation of the great blocks, seem to indicate that this temple was never finished. No traces are to be found of an altar, of steps, or of interior porticoes. It is believed that the building was interrupted when Agathocles devastated the town during the Punic war. The preservation of the edifice itself, so far as it was completed, is as perfect as possible. Its interior is completely unfurnished,

Temple of Neptune at Pæstum.

UNIV. OF
CALIFORNIA

except with grass, upon which flocks browse in the shadows of the columns. No roof covers it but the vault of heaven. This solitary colossus towering over the mountains, with its reddish columns eaten away by time—an abandoned ruin rising in the midst of the desert—calls forth the admiration and respect of him who is fortunate enough to behold it.

Asia is the cradle of Greece. The Hellenic race sojourned for a long time in Ionia; but the devastations of the Persians and the Turks have scarcely left there any memorials of their ancient architecture. Some columns at Ephesus, some tombs—among others the famous Mausoleum —are almost all that can be traced.

According to Pindarus, the first temple of Ephesus was built by the Amazons at the time when they made war upon Theseus. Strabo attributes it to the architect Ctesiphon; and Pliny informs us that before being burnt it was a type of architecture as much admired for the proportions of its columns as for its capitals. After Erostratus burnt it, in 356 B.C., says Strabo, the gifts brought from all parts, the donations of pious women, the presents of the colonies, and the valuable articles deposited by the kings in the ancient sanctuary, enabled the people to rebuild the temple on a still more magnificent scale. All Asia joined in the undertaking, and the structure took no less than 220 years to raise. It was placed on a marshy soil, to ensure it against earthquakes; and in order to obtain sufficiently strong foundations for such a considerable mass, a bed of ground carbon was laid down, and a bed of wool above that. The entire temple was 425 feet long and 220 feet wide. As many as 127 columns were raised in honour of as many kings, which columns were 60 feet high. Of these columns thirty-six were sculptured.

Perhaps the greatest marvel in connection with the whole enterprise was the raising of the architraves. The greatest difficulty was experienced with the frontispiece over the entrance gate. Such was the weight of this enormous mass that it could not be placed upright. The artist was on the point of committing suicide; but during the night, says Pliny, a goddess informed him that she had arranged the stone, and in the morning he found that the promise had been redeemed. Chirocrates is supposed to have been the architect, the same who built Alexandria. Works from the chisel of Praxiteles and of Trason covered the altar and walls. As for the wood-work, it was simply wonderful—all the carpentry being in cedar.

In the thirteenth century A.D. the Persians first, and afterwards the Scythians, pillaged and burnt the temple of Ephesus. What of destruction was left unaccomplished by these was completed by the Goths and Mahomet the Great. The temple is represented upon ancient medals bearing the effigies of Diocletian and Maximin, with a frontispiece of two, four, six, and eight columns respectively—variations to be attributed solely to the caprice of the engraver. This temple was the most perfect model of the Ionic order.

Among the Seven Wonders of the World might with justice be ranked the Mausoleum, or tomb of the Carian King Mausole, at Ephesus, raised by his wife Artemisia. South and north its walls, according to the elder Pliny, measured 63 feet; but the two others were not so large. The entire circumference of the remains is 411 feet, and the height 25 cubits. Thirty-six columns formed a peristyle around it. It was erected at different epochs—the north side was built by Bryaxis, the east by Scopas, the south by Timotheus, and the west by Leocharis. Queen

Artemisia, who had designed the monument in honour of her spouse, died before it was completed; but the artists, believing that it would redound to their glory and to the interests of art, determined to finish it. This was accordingly done, and above the peristyle, or pteron, a pyramid was raised of the same height as the rest of the edifice, composed of twenty-four steps, which decreased in size as they ascended. Upon this summit is a quadriga, the work of Pythis, which accessory gave to the structure a height of more than 150 feet.

Other Greek tombs at Alinda, in Asia Minor, in Sicily, in the isle of Santrim, present the form of a square tower sustained by Ionic and Doric columns. These monuments succeeded the tumuli of the Pelasgians, which we find among the Etruscans, and even among the Romans.

CHAPTER VI.

ANCIENT ROME.—I. THE ROMAN FORUM.

ROME borrowed her chief architectural ideas from the Etruscans and the Greeks; but what she thus took she reconstructed in accordance with her own spirit, converting the whole into realisations of grandeur and ostentation, in response to the wants which arose from her conquests and her wealth. Captivated with the beauties of Grecian architecture, she quickly abandoned the Tuscan model she was following for the primitive Doric. She added even to the graces which she borrowed, and in order to enjoy at once the Ionic and the Corinthian, she combined the two into an order which has consequently been termed the Composite. In the external appearance and the decoration of those buildings can clearly be traced an imitation of Greece, and often the workmanship of Greek artists; but they all possess at the same time that special individual character which at a glance declares that the structures are Roman in their essential principles. Roman architecture may be described as an original transformation of Greek architecture. Applying it to much larger structures, Rome introduced the superposition of orders in storeys, substituting the vault and the arcade for the ceiling and the plat-band. She employed the smallest materials, and enlarged the intervals between the points of support. The temples alone remain tolerably faithful to the Greek type. The triumphal arches, the baths, the amphitheatres, and the aqueducts

widely differ in their structure from the Greek model: these are all purely Roman works.

The spectator could not walk ten paces in the ancient Forum without perceiving that he was not in Athens. Situated at the foot of the Capitol, it formed one of the prominent objects of ancient Rome. Upon a height which circumscribed the view rose the Tabularium, or palace of Archives, at the foot of the fortress of Romulus and of the temple of Jupiter Capitolinus. Regarded at the present day, a number of protecting divinities are seen grouped together, whose duty it was supposed to be to watch over the fortunes of Rome. The Capitol—that cradle of an empire that has lasted 1,200 years—is now a mere common hill garnished with mansions devoid of grandeur. Its height even has been diminished, owing to the masses of rubbish that have gradually accumulated around the sides, and it was found necessary to dig up and remove the soil in order to restore to the half-buried ruins of the Forum the elegance of their proportions.

The arch of Septimus Severus, the foot of which was for a long time buried underground, rises in front of the Capitol, near the Mamertine prison, where so many of the vanquished died after having marched in the triumphal procession of their conquerors. It was raised about the year 203 A.D., in honour of Septimus Severus and his two sons, Caracalla and Geta. A number of Corinthian columns separate the three unequal semicircles. Above the middle one recline two figures of Victory, while above the smaller arches are bassi-rilievi, representing combats between the Parthians, the Arabs, and other Eastern nations. Formerly the upper platform supported a huge chariot in bronze, conducted by Severus and his two sons around the figures of Victory.

The Arc du Carrousel in Paris is a copy of this triumphal arch.

Leaving the arch of Septimus, the spectator sees on the right and in front of him almost an entire side of the temple of Fortune, the three Corinthian columns of Jupiter Tonens, and the beautiful remains of the Grecostaxium, where foreign ambassadors were lodged. In the same direction, towards the left, the visitor seeks in vain, in the pediments of the church of St. Adrian, for any vestiges of the Emilia basilica constructed towards the latter years of the republic, and restored by Tiberius. This structure enriched St. John de Latran with a gate of brass, and St. Paul with numerous pillars in violet marble. It is gratifying, however, to find that the high façade of the temple of Antoninus and Faustinus has been spared—a façade which Goethe always regarded with great admiration.

The edifices which enclosed the Forum on the east having fallen, gives an uninterrupted view on the right of the Palatine Hill, where Augustus and Nero had their palaces and gardens. It is at the present day merely a huge collection of open vaults, buried galleries, and halls paved with mosaics. Close at hand is the arch of Titus, on the Via Sacra. It was raised at the end of the first century to commemorate the taking of Jerusalem. In spite of its limited dimensions and its singular appearance, the beauty of its proportions and sculptures renders it a true model of the class of architecture to which it belongs. It has lost four of the eight composite columns that ornamented its façades. Two admirable bassi-ilievi are to be seen on it, but they are unfortunately mutilated. One represents Titus on a chariot conducted by a female figure of Rome, crowned with victory, escorted by a multitude of soldiers, senators, and people. The other

depicts the spoils of Jerusalem, the table of gold, the seven-branched chandelier, the sacred vases, and the Jewish prisoners. On the frieze, on which is emblazoned the triumphal pomp, is the river Jordan figuratively represented and carried by two men. Four Victories decorate the archivolt.

At some distance on the left may still be admired the enormous ruins of a basilica, called the temple of Peace, the astonishing vaults of which inspired Michael Angelo. This edifice originally formed an oblong more than 325 feet by 212. Prodigious Corinthian columns sustained a long nave and two aisles. All the vaults shone with mosaics and ornaments in bronze. There now remain only the bays of the left aisle and the commencement of the great vault. The only column that remained intact was transported to one of the squares of Rome, the centre of which it now decorates.

Between the arch of Titus and the Colosseum, the imposing ellipse of which looms grandly upon the spectator, only the shafts of overturned columns are to be met with. On the right, at the bottom of a lonely avenue, the arch dedicated to Constantine after his victory over Maxence opens its three semicircles, surrounded by eight beautiful fluted antique pillars of the Corinthian order. The bassi-rilievi of the lower part, executed in the time of Constantine, attest the decline of that art; but others, to the number of twenty, placed higher up, are specimens of the best style, though these properly belonged to one of the arches which ornamented Trajan's Forum.

Of the first great stone amphitheatre, constructed about the year of Rome 725, upon the Campus Martius, by Statilius Taurus, there now remains not a single trace. Augustus declared his intention of constructing another, but this task was left to be accomplished by Vespasian, who made his

Jewish prisoners work for him gratuitously. Titus built the Flavian amphitheatre, and dedicated it about the year 80 A.D. Struck with its immense proportions, the people called it the *Colosseum*. At the inauguration under Titus, 5,000 wild beasts were put to death, and 11,000 on the occasion of the games which celebrated Trajan's victory over the Parthians. Probus caused a little forest to be planted in the arena, in which he placed a thousand ostriches and a vast number of other animals. In the sixth century the practice of celebrating the barbarous games for which the building was reared was disused. A fortress in the middle ages, and afterwards an hospital, the Colosseum finally became a sort of quarry, from which the Farnese and others took material to build their palaces. Leo X. put an end to these depredations, and consecrated the building to the memory of the martyrs that had been devoured within it by wild beasts. Walls and buttresses of support were latterly employed to arrest the decay of the building, and these accomplished the object in a large measure even after half the exterior wall had disappeared.

The exterior of the Colosseum presented four storeys superposed: three arcades, with piers ornamented with Doric, Ionic, and Corinthian columns; and one with pilasters ornamented with a bold cornice, at which were fixed mats, to be stretched across for the protection of the spectators from the sun. Two subterranean storeys contained the animals, which were brought up by traps. Altogether, the building covered a space of 65,000 square feet.

The oval arena, 260 feet long by 150 in width, had its two entrances situated at the two broad extremities of the circus. It was surrounded by gradually ascending steps, which formed seats for the spectators. On the first rank

The Colosseum at Rome, from a photograph.

UNIV OF
CALIFORNIA

were placed, at one side the box for the imperial family, and on the other that of the consuls. Right and left were places reserved for ambassadors, first magistrates, senators, and other great dignitaries. The senators and equites occupied stalls of white marble, these "upper ten" being separated from the plebeians by a deeply cut division, forming a kind of fixed gulf between them. The amphitheatre terminated with a beautiful portico at the roof, formed of eighty marble columns. The Colosseum accommodated 90,000 spectators.

Night is the time when one should contemplate the Colosseum, when a beautiful, clear moonlight plays among the hollow vaults and on the broken steps, giving to what it lights up, and what it darkens with shadow, proportions more vast and shapes even stranger than their own. Then it is that the terrible scenes of the past crowd on the memory of the traveller.

We imagine we see, says Chateaubriand, "the people assembling in the theatre of Vespasian; all Rome gathered to drink the blood of the martyrs; a hundred thousand spectators, some shaded by the hems of their robes, others by umbrellas, crowding the seats; multitudes vomited forth, as it were, by the porticoes, descending and ascending the long stairs, and taking their places. Railings of gold ward off the senators' box from the attacks of the ferocious beasts. Ingenious machines scatter a perfumed spray throughout the vast space, cooling the air and making it pleasant. Three thousand statues in bronze, an endless multitude of pictures, columns of jasper and porphyry, balustrades of crystal, vases of the richest workmanship, dazzle the eye and lend variety to the scene. In a canal surrounding the arena swim a hippopotamus and crocodiles. Five hundred lions, forty elephants, and tigers, panthers, and bulls, accustomed to the

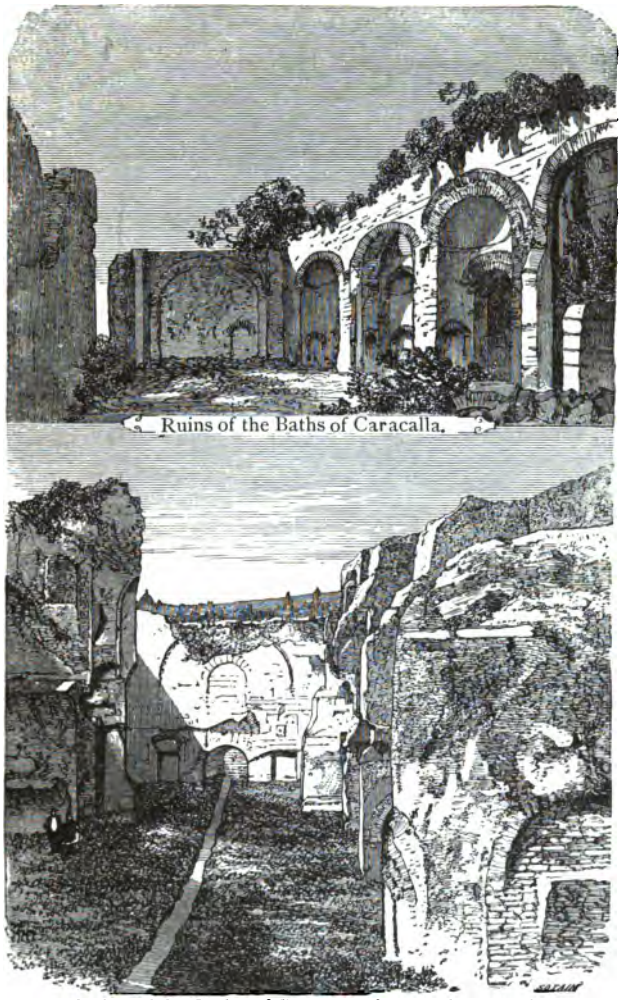
slaughter of human beings, rage and roar in the caverns of the amphitheatre; while here and there gladiators not less ferocious wipe their blood-stained arms."

The Baths exhibit the life of the Romans even more intimately than the amphitheatres. Of these there were at Rome more than 800, which were frequented from mid-day till evening. Agrippa was the first who opened them to the people, and a great many emperors, wishing to eclipse their predecessor in luxury and magnificence, followed his example. We can still see the ruins of the baths of Titus; those of Diocletian furnished to Michael Angelo the idea which resulted in the beautiful church of St. Mary of the Angels; while those of Caracalla have been preserved from being put to other uses by the vast quantity of rubbish accumulated about them.

At the foot of Mount Aventine, in a deserted region of Rome, in the midst of wild vines, are vast ruins which time has covered over with mosses. Here lizards sun themselves in peace, and here the humble guardian of the ruins has built himself a squalid hut, in which the huntsman of the Emperor Caracalla would not have kept his dogs. At certain places one can climb from stone to stone over green mounds, which were originally porticoes and colonnades. In these baths the bathers had 1,600 marble seats, special and common halls, and hot and cold baths of various degrees of temperature.

One of these baths was 110 feet in diameter; another measured 126 feet by 78, exclusive of the niches around the sides and the halls at each extremity. The vaulted roofs were supported upon pillars 45 feet high, one of which was carried off to the Trinity Square at Florence, where it stands surmounted by a statue in red porphyry.

Univ. of California



Ruins of the Baths of Caracalla, from a photograph.

UNIV. OF
CALIFORNIA

Taken in their entirety, the aspect of the baths was monumental. Upon the Appian Way rose two storeys of porticoes, and behind the long gallery of 1,170 feet formed by these, a vast platform, at the height of the first storey, supported the building, surrounded with plantations. Within were all sorts of appliances for the exercise of the body and amusement of the mind, which the ancients always combined. Everything had its special purpose and character, and there was such an infinite variety that all wants and tastes might find their gratification.

Looking at these baths, the spectator cannot help feeling that the impression caused by the Colosseum itself becomes weakened. Nowhere within the Eternal City do we trace more distinctly the vast accumulation of riches among a single people.

In the refinements of these baths may be read, as in a book, the intense, luxurious, and delicate life of the Romans. It might be well to recall these baths, which were at once public baths, restaurants, gymnasiums, promenades, libraries, halls of declamation, and congresses, before we boast of our own civilisation and prosperity.

II. THE PANTHEON, &c.

On the other side of the Mount Aventine, near the Tiber, lie the inhabited quarters of Rome, containing curious ruins, which we can only mention. Here is the small temple of Vesta, a charming spiral edifice, formerly open on all sides, and covered with a white dome supported by twenty fluted columns of white marble; but at present submerged in a heap of bricks, and hidden by the fallen roof. Here,

also, are the arches of the four-fronted Janus; and further off the opening of the *Cloaca Maxima*, a celebrated sewer which dates from the time of the Kings of Rome. Still further off lies the beautiful temple of *Fortuna Virilis*, now converted into a church called the Egyptian Mary.

Holding on in the same direction, we come next to one of the most beautiful and best preserved remains of ancient Rome—the Pantheon of Agrippa. The site of this building is ugly and dirty. Its approach is guarded by a granite pillar, formerly an obelisk of Serapis, and a fountain, the water of which falls back into a basin of porphyry. So great is the accumulation of rubbish about the ruins, that only two out of the five steps leading up to the edifice are now visible.

Agrippa's Pantheon consists of two very distinct portions—a rectangular portico and a circular body. Even in its present state of decay, a want of harmony can be detected between the ornamented façade and the high, red, bare walls, which have lost all their exterior decoration. This is explained by the fact that the portico and main body of the building are, in reality, different structures. The circular part possesses a façade independent of that of the portico; and these differ from each other in style, that of the portico being superior to that of the Rotunda.

Bestowing a few minutes' examination upon the details, we find that the superb peristyle is sustained by two ranges of eight columns 42 feet in height, irrespective of bases and capitals, the whole composed of white marble. Each column is hewn out of a single block of Eastern marble; those in front being of white and black granite, and the others of red granite. There are very small spaces between the columns. The front columns sustain a noble

The Pantheon at Rome.

UNIV. OF
CALIFORNIA

entablature, but the mass of the pediment rests upon arches concealed by the architraves. Formerly, the bassi-rilievi of the pediment, the inscription, and the great gate of the temple were of bronze. All this metal, however, was removed in the seventeenth century by Pope Urban VIII., and has since been used in constructing the immense canopy of the altar of St. Peter's.

The great gate leading into the temple opens between fluted pedestals wrought in bronze, and the gate itself is covered with thick plates of the same metal. Furthermore, we note that the threshold is of African marble, and the sides and architrave of white marble. The interior of the temple is no less rich than majestic, its diameter being more than 13 feet, and the thickness of the wall 19 feet. From pavement to summit the height is the same as the diameter. Light is admitted by a single circular opening, 29 feet in diameter, in the middle of the vaults. Access to the cupola is obtained by a flight of 190 steps.

Passing to the interior, we find that the circumference of the Rotunda is decorated with Corinthian columns of rare marble, to which pilasters are attached, the bases and the capitals being of white marble, and the frieze of porphyry. Above these is a range of windows, now walled up, the entablature of which supports the cupola. Plates of silver and bronzes covered the ribs of the vault in former times; and bronze caryatides, the work of Diogenes of Athens, guarded the windows.

In the year 27 B.C., on the occasion of the victory of Actium, when universal peace was declared, the great edifice was dedicated to all the gods, and figures of these in gold, in silver, in bronze, and in precious marbles were placed in niches within it, and hence the name Pantheon.

To the same date as the Pantheon ought to be assigned the theatre of Marcellus, the remains of which are united to a particular house. It was a vast and superb edifice, more than 325 feet long, and could contain 16,000 spectators. Augustus dedicated it to his nephew, the poetic youth commemorated by the genius of Virgil. Of the four semicircular stages which constituted the wall, traces of only two remain. Every one admires the equilibrium of its Ionic columns. These form the models which are followed by modern architects in designing structures wherein the orders are superposed.

Among the monumental forms of which Rome has furnished us the type, the votive columns must be classed. There were two of these—the Antonine, dedicated to Marcus Aurelius; and the Trajan, of which the column in the Place Vendôme, at Paris, is a bronze reproduction. The Trajan column had the immense pile of rubbish surrounding it cleared away for the first time in 1540, but it was not entirely revealed till 1813. In height it has often been excelled, but it would be difficult to find anywhere an equal harmony of proportions. Its pedestal is admirable, and the spiral bassi-rilievi which twist around its shaft of white marble have been studied with advantage by Raphael. For the pedestal, the shaft, the capital, and the statue of Trajan, Apollodorus of Damas, the architect of Trajan's Forum, employed thirty-four blocks of marble, marvellously fitted together. Throughout its whole length the column is pierced by a staircase leading to the summit. What forms the particular beauty of Trajan's column is the unity of conception which it displays. Everything is varied, but there is no incoherency. Underneath, in the earth, was the golden urn that contained the ashes of Trajan; and upon the pedestal

Trajan's Column at Rome.

UNIV. OF
CALIFORNIA

garlands of oak, symbolical of peace, were suspended. Laurels gird the base of the pedestal. The shaft is enriched with a kind of endless scroll, which winds round its circumference from base to summit. Here may be beheld, ascending as it were from the bottom to the top, 2,500 figures of soldiers and prisoners, with an endless number of horses, elephants, weapons, and war-material. Standing on the top, the conqueror, as it were, looks down upon this triumphal cavalcade marching upwards in winding file, and is recompensed for his victory. Above the tomb is the trophy; above the trophy the apotheosis; and—rare fortune for a monument—nothing jars upon the mind of the spectator in gazing at this great memorial; for he remembers that Trajan deserved all the honours that were paid to him.

Only accidentally, as in the case of Trajan's column, were these votive pillars employed as tombs. Among the architectural forms which the Romans preferred for the purposes of sepulture, the tumulus and the tower were the richest and the most considerable. Adrian's Mole, that enormous mass which has so often served Rome as a citadel under the name of the Castle of St. Angelo, is simply the mausoleum of Adrian. "I have but little pleasure," writes Brosses, "in seeing the castle of St. Angelo fortified with its five bastions, when I remember that it was originally but a monumental tower of three storeys surrounded with porticoes and statues." The principal portion of the tomb is raised in a solid mass upon a square basement, ornamented with niches and Doric columns. In shape it was circular, and its two porticoes, superposed the one above the other, inclining inwards, supported a dome surmounted by a hugh pine-apple in bronze, now to be seen in the Vatican. The exterior was wrought in white marble. The circumference of the square measured

1,170 feet, and that of the first portico was 580 feet, the total height being nearly 300 feet. After the Pyramids of Egypt this is the most stupendous sepulchre that ever was constructed.

Adrian's Mole formed a pendant to that of Augustus, of which the ruins are still seen on the other bank of the Tiber, near the gate of Ripette. The mole or tomb of Augustus, it is supposed, was destroyed by the Norman Robert Guiscard about the eleventh century. Nothing now remains of its cupola or of its porticoes. The two obelisks which were formerly placed before its entrance, at the present day decorate the apse of St. Mary Major and the square of Monte Cavallo. Within the arena formed by its lofty vault graduated seats and boxes were in ancient times constructed, for the accommodation of spectators to witness bull-fights and other spectacles of a similar character which there took place.

Richness of conception and decoration was the distinguishing trait of the Roman tombs, and this is explained by the purpose they were intended to serve—the decoration of the principal streets of the city. The tomb of Augustus was in former times the centre of a vast necropolis.

The Appian Way passed between two great rows of sepulchral monuments, of which the most famous and the best preserved is that of Cecilia Metella, wife of the triumvir Crassus. This latter formed a vast circular mass, the diameter of which was 98 feet.

Not far from the gate of St. Paul stood the monumental pyramid of Caius Cestius, an obscure contemporary of Augustus. It was 130 feet high, 98 feet wide at the base, and entirely faced with white marble. The burial vault, 19 feet by 13, had a plain circular roof, and was de-

rated with a number of pictures executed upon very hard stucco.

In all these constructions—arches, temples, amphitheatres, baths, columns, and tombs—whatever was not positively enormous in size was at least solid and strong. It was the custom of the Romans to combine beauty with strength, but beauty was for them none the less an object of their efforts because they considered it should be combined with utility. They may be said to have chosen by instinct outlines, curves, and elevations that pleased the eye—a custom from which modern architects might learn a useful lesson. The twenty-two aqueducts which, down to the time of Procopius, brought supplies of the purest and most wholesome waters to Rome, were not only admirable for the perfection of their interior arrangement, but they also served as a decoration to the country through which they passed. Nothing could be more noble or more simple than their innumerable files of arches which bore water to the Eternal City. At the present day their ruins are striking, and break the dead monotony of the desert plains, where rattle the many-coloured wings of the grasshoppers, and little is to be seen but parched herbage. Looking upon the remains of the *Anio Novus*, the traveller can easily imagine what it was in ancient times. It was the most important of all the aqueducts, was nearly 60 miles long, and in some places the height of its arcades was 130 feet. Constructed under Caligula and Claudius, about 30 B.C., it carried to Rome the waters of the river Anio, which at present is known by the title of the Teverone, and forms the cascades of Tivoli at the foot of the circular temple of the Sibyl Albunea.

Whilst Rome drew toward herself all the wealth and the active forces of the countries she conquered, making use first

of Italy, then of Greece and the East, and eventually of Spain and France, she gave an equivalent wherever she carried her eagles, and spread all around her genius and her arts. Edifices of every kind were reared upon the banks of the Tiber, the prevailing ideas of which were borrowed from other nations; while foreign countries, on the other hand, were embellished with the products of the Roman genius.

Italy was covered with aqueducts, and the highways were lined and ornamented with tombs. Towers and temples covered the land. Herculaneum and Pompeii, preserved and sealed up as it were in lava, still show us how great were the luxury and the good taste prevailing even in the smaller cities. Following the example thus set by Rome, almost every town in the ancient world came in time to have its arena, its triumphal arch, its columns, and its baths. Rome multiplied herself, yet remained ever unique. She has left recognisable imprints of her presence in Syria, Egypt, India, Africa, France, and Spain. From the second century everything became Roman in its characteristics, and ages have not sufficed to suppress the habit which became a second nature.

CHAPTER VII.

THE ROMAN WORLD.—I. THE WEST.

FRANCE, which was under the domination of Rome for more than 500 years, still preserves some antique temples reared under the influence of the Romans. That of Vernegues, some miles from Aix, recalls by its pointed leaves and Corinthian capitals the early times of the conquest. Vienne, in Dauphiné, also possesses a temple which contains at the present day a rich collection of antiquities. The circumference is still entire, but the edifice is disfigured by the efforts that have been made to restore it. Undoubtedly the best preserved and most important of these ancient structures which have escaped the devastations of barbarians, and the hostile zeal of early Christians, is situated at Nîmes. It is called the Maison-Carrée, or Square House—owing, doubtless, to its rectangular form. At the present day its interior is used as a museum. Fronting it rises a portico, placed on a beautiful basement; and its three other sides are decorated with engaged columns. A vast colonnade, the bases of which are still to be seen in the fosse facing the temple, formed at one time a forum. This beautiful edifice was attributed to Augustus; but the exaggerated richness of the frieze and the Corinthian cornices, and an inscription on the façade, fix the period of its construction in the time of Antoninus.

Even before the conquest of Cæsar, Nîmes was quite a Roman town. An inscription attributes to Augustus the

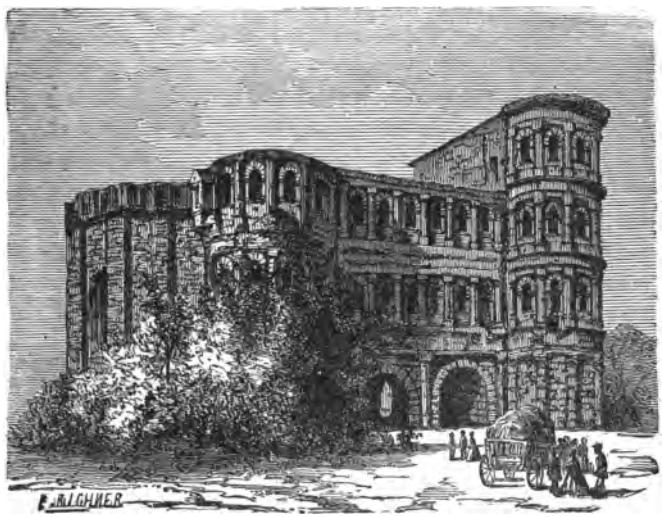
building of the walls. The line of walls can be traced for a considerable distance, and, judging from the remains, they must have been about 29 feet high, and from 6½ to 9 in thickness. Like the gates, the town and upper parts were constructed of hewn stone. We can still distinguish the

The Square House of Nîmes.

shape of the two gates, which were named the gates of France and of Augustus.

Traces of Roman towers are still to be seen in the citadel of Carcassonne. Langres and Trèves also have preserved remains of ancient walls and gates, but they are not in any way comparable to the gates of Arroux and of St. André at Autun.

"When we see the remains at Autun," says Mérimée, "and recall the terrible disasters which that town has suffered, imagination can scarcely picture to itself what it must have been in the days of its splendour. At the end of the third century it was sacked and burnt, and its



Roman Gate at Trèves.

temples and edifices were for the most part levelled. Attila continued the work of devastation when he made himself master of it in the middle of the fifth century. Thereafter the Huns contributed towards the destruction of the remaining ruins, and finally Rollo and his Normans found something still to destroy, their visit being the last and most terrible blow which was given to the unfortunate town."

Like those of Nîmes, but higher and thicker, the walls formed a grand line, flanked by 220 round towers. The two gates still exist, and are among the most perfect that are known. They have two great bays, 13 feet high and 6½ wide. They are of hewn stone, laid without mortar, and their style, strong and severe in its outlines, is very imposing.

In spite of its decay, the gate of Rheims, built in the year 360, is very interesting on account of some bassi-rilievi, and especially for its unique arrangement, which consists of three almost equal arches resting upon the same moulding.

Whilst on the subject of gates, it may be mentioned that in France many Roman triumphal arches are to be found, but they are almost all in a state of decay. One only, which is very simple in its design, and is pierced with two equal semicircles, like the gates of a town, belongs to the Augustan age. It is to be seen at Saintes, on the banks of the Charente, in a favourable spot to which it has been recently transported, stone by stone. Formerly it stood upon the middle of the bridge.

The most celebrated Roman arch in France, however, is that of Orange. No traveller omits to pay it a visit, and contemplate its three circles and the sculptures which ornament them. It has been skilfully repaired, fortunately by architects whose object was to strengthen the general mass without touching its details. In this, as in other cases, man had hurried on the work of destruction more than the elements. One cannot but specially admire the composition of the maritime trophies depicted upon the arch, and the beautiful execution of their details. Some antiquarians assign the erection of the triumphal arches of Provence, Orange, St. Remy, and Carpentras, all to the same date,

and the same purpose—namely, to celebrate the victories of Marcus Aurelius in Germany and on the Danube.

At Benevento, in Italy, we shall, however, find the most beautiful arch raised by the Antonines. Ancient tradition gives it the name of the gate of gold. It resembles the arch of Titus in its unique bay, its frieze ornamented with a triumphal procession, and its bassi-rilievi between the columns. Both in its entirety and in its details it has escaped barbarian hands, and has been very tenderly dealt with by time. It is constructed wholly of Parian marble, and is remarkable for the beauty of its proportions and the richness of its composite style. It does great honour to the reign of Trajan, whose victories it celebrates, and to its architect Apollodorus of Damas, the architect also of the famous column of Trajan.

Passing from the triumphal arches, and coming next to monumental remains, we find among the Roman tombs of Provence two of an original form. One near Vienne bears, upon a basement vaulted and pierced by four arcades, a pyramid 50 feet high; the other, at St. Remy, is raised upon two steps, and its square basement is ornamented with three beautiful bassi-rilievi, and with Ionic pilasters. The first storey rises above the moulding that terminates the basement; in each of its fronts is worked a richly-ornamented arcade, and four Corinthian columns are engaged in the four angles. Muses sport upon the frieze; the crown of the tomb is formed by an elegant circular colonnade, covered by a cone ornamented with imbricated scales. Within the columns two statues are preserved.

France is rich in amphitheatres, and can show remains nearly equal to the renowned arenas of Verona and Pola.

Rousseau, in the last century, complained of the neglected

state in which the arenas of Nîmes were allowed to lie. "This vast and superb circus," he says, "is surrounded by contemptible little houses, while huts still smaller and more contemptible fill up the arena; so that a disagreeable and confused scene meets the eye, instead of one that might awaken pleasure and surprise." Not till the year 1810 was

The Arena of Nîmes.

an act passed for the clearing of this great amphitheatre, and now there is no obstruction to the view. Situated in the middle of the town, and not far from the ancient wall, the arenas of Nîmes have long been famous for their size and preservation. Their extent is 420 feet by 330. They are supposed to be contemporaneous with the Colosseum; and they could, like it, be transformed into a place large

enough for a naval battle by the flooding of the canals surrounding the arena, but which were generally covered over. Two rows of porticoes, with arcades, form the exterior decoration of the amphitheatre, and are in a style of decoration at once compact and simple, somewhat akin to the Doric. The interior presents only a picturesque mass of ruins; but the principal parts may even yet be easily distinguished. Seats to the number of thirty-five were divided into four classes, each department of which was supplied with separate exits and entrances. A judicious distribution of the galleries, staircases, and doors of egress, saved the 20,000 spectators whom it could accommodate the inconvenience and struggle which the architects of our modern theatres do not know how to avoid.

Large as was the circus we have been describing, the amphitheatre at Arles was still larger, being, in fact, the largest in France. It was built upon lofty and very solid vaults. Nothing could have been more imposing than the interior of this edifice, built of enormous blocks, cut with true Roman precision. The two stages of exterior porticoes were separated by a cornice at the parts now hardly recognisable, which rested upon the engaged columns between each arcade. The first storey was in the robust Doric, and the upper was Corinthian, as is proved by one column, which is the only one that retains its capital. The top part of the building has long ago disappeared.

M. Mérimée has drawn a parallel between the two structures, which will be read with interest.

He says:—"At Nîmes the arena, disencumbered of all obstructions, occupies the centre of a large space, where, at a single glance, we can take in the whole enclosure; while at Arles the vicinity of the houses and the slope of the land

permit us only to get glimpses and snatches of the ancient amphitheatre.

"Although the exterior porticoes of Nîmes greatly resemble those at Arles, some differences are observable not to the advantage of the former. For example, the centre of

The Amphitheatre of Arles.

the interior archivolts of the second storey and that of the exterior archivolts are different, an irregularity which offends even the inexperienced eye, and which nothing justifies. At Nîmes, as well as at Arles, the galleries of the first stage are formed by a suite of vaults enclosed between two *bandeaux* of a single stone resting upon piers; but in the arena of Arles the eccentricity of this construction is less apparent.

"If the arena of Arles is better preserved in the interior, the wall of that of Nîmes is more intact, and its crown has not suffered so much; it still preserves the greater part of the corbels, where were implanted the poles used to support the awnings for the protection of the spectators from the sun. Taken together, these two amphitheatres furnish almost complete details of the construction of these buildings, the purpose of which, and their gigantic proportions, argue a state of things so different from our own."

Leaving the amphitheatres, we turn next to the baths, and here again we find distinct traces of Rome in Western Europe. The best known are those of Julian, at Paris, the cold bath hall of which alone preserves its vaulted roof 50 feet high, which has for many ages been covered with a layer of earth four feet thick, capable of nourishing great trees. The springings of this greatly admired vault repose on the prows of vessels carved in stone; and altogether the remains of these baths are considered as the most ancient of the city of Paris.

At Nîmes also there exist important remains of baths, which contribute to the ornamentation of a charming garden in which they are situated. Specially may be mentioned the beautiful cold pool, surrounded by a low colonnade, and divided into chambers by partitions of stone. Several conduits of water meet in this pool, over which perhaps a nymph presided. For some unknown reason the place has received the name of the Temple of Diana.

After the relaxations of the bath and excitement of the arena, the attractions of the theatre formed the next great amusement of the Roman world. We have described what remains of the theatre of Marcellus; but, in this respect, France has been more favoured than even Italy itself.

Orange contains an admirable theatre, very well preserved; its façade is seen from a great distance, and towers over all the modern buildings, its wall being 330 feet long and 110 feet high. The nearer one approaches this wall the more prodigious it seems to become, and the more one is astonished that so simple a wall should produce so powerful an impression. Three gates or doors symmetrically arranged, a range of false arcades, two lines of corbels, and a bold cornice, are all that break up the monotony of this great wall. Beyond the wall the building is a chaos. Where in former times stood the stage, the retiring-rooms, and the machinery, are now to be seen merely remains of foundations, of basements, vestiges of corridors, and the débris of staircases. Three superposed colonnades of granite and white marble which decorated the interior façade have been destroyed or removed. Traces of a violent fire are discoverable, which has reddened the stones, calcined the marble, and left great heaps of ashes upon the soil. The stone seats curve round on a hill, partly artificial and partly natural; they are numerous and high, but even when one has ascended to the topmost step the huge wall of the façade seems to tower as high as ever. For a long time encumbered with mean structures, the theatre of Orange is now cleared; but between the proscenium and the seats grows a little grove of fig-trees, which adds to the picturesqueness of the colossal ruins.

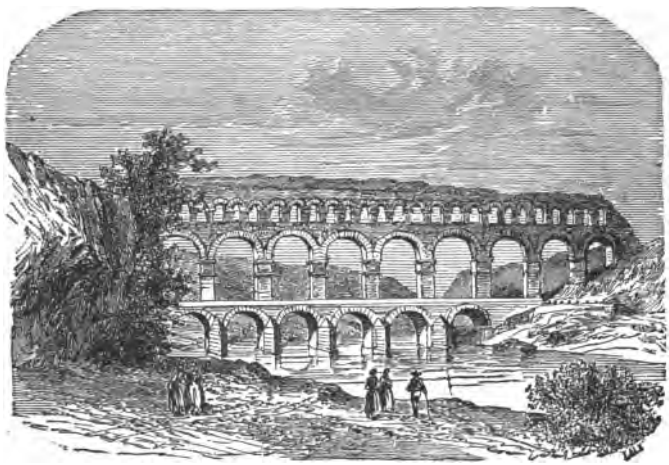
Aqueducts, again, such as those which covered the Roman Campagna, and surround the greater number of the cities of Italy, are not wanting in France. Traces of them are to be seen at Fréjus, Luynes, Saintes, Jouy, Arcueil; while of those at Lyons have been left important remains. Near the village Oullins on the right bank of the Rhone, at

the bottom of the valley of Bonnant, extend these picturesque ruins. Here the entire arches and pillars are covered with ivy; at other places may be seen, still adhering to the Roman brick, the dried branches of other ivies long dead, and perhaps in their day contemporaneous with the great work itself. Those parts that are naked display marks of extremely beautiful construction. Portions of the aqueduct are built of white and black stones on the draught-board pattern, with courses and arches in red bricks

Ascending towards the vicinity of the village of Chaponost, we notice still more considerable remains of the aqueduct that conveyed the waters from Mount Pilat to the ancient Lugdunum, a distance of forty miles. These waters were collected in admirable reservoirs, and distributed by means of a system of ingenious syphons, of which the one under notice is the only example to be found.

The famous Pont du Gard served the double purpose of a bridge and an aqueduct. It crossed the river Gardon between two mountains some leagues from Nîmes. Three ranges of arcades, superposed, decreasing in size from the lowest range, and constructed of hewn stone laid without mortar or cement, constituted this marvellous work. No other ornaments, save great embossments, adorn these huge piles formed by enormous heavy blocks. Rain has not been able to penetrate the seams of this uncemented structure, nor has time been able to dislocate its joints. And yet the architect provided for such a contingency, for he erected certain piers which were intended to sustain scaffolding for the purpose of making whatever repairs might in time be necessary. "Such confidence," says Mérimée, "had they in the stability of their empire, that they provided for the day when repairs might be necessary for the Pont du Gard!"

The canal of this viaduct was between 5 and 7 feet wide. It was entirely covered with thick flag-stones, coated with a species of stucco cement to prevent evaporation. It was paved with impermeable mortar, and stretched along the summit of the topmost range of arcades, 160 feet above the earth. The Pont du Gard is in the style of the



The Pont du Gard.

best Roman epoch. It is attributed to Agrippa, who came to Nîmes in 19 A.D., and who had the superintendence of the waters at Rome. No Roman monument is more admired. Rousseau says of it:—"After partaking of an excellent breakfast of figs, I took a guide and went to see the Pont du Gard. It was the first Roman work I had ever gone to see, and I did not expect to behold a monument worthy of the hands that constructed it. When I reached it, however,

I found that the object itself surpassed my expectations. This noble and simple work struck me all the more because it lay in the middle of a desert, where silence and solitude added to the general effect. I could not help asking myself what force it was that transplanted these enormous stones from their quarry, and assembled together thousands of workmen in an uninhabited region. I traversed the three storeys of arcades, of which the aqueduct is composed, and the echoing of my feet on these immense vaults made me believe I heard the strong voice of those who built it. I was lost like an insect in its immensity. And yet, though feeling myself altogether insignificant in body, something elevated my soul, and with a sigh I exclaimed, 'Would that I had been born a Roman!'"

The bridge of Segovia, in Spain, deserves to be mentioned after the Pont du Gard, although it is not its equal in majesty, having only two ranges of arcades. Its great grey blocks touched with black, and laid without cement so closely that not a weed has been able to strike its roots into their crevices, increase the grandiose appearance of the structure by their severe colour. It has been attributed both to Vespasian (69 A.D.) and to Adrian (117 A.D.). Isabella, the Catholic, removed thirty-five of its arches, but the aqueduct is still in use, and carries the waters of a little river called Rio Frio.

The bridge of Alcantara, over the Tagus, is not an aqueduct, but simply a bridge 609 feet long, 26 feet wide, and 200 feet high. It is the work of Trajan, the first emperor of Spain (98 A. D.), and formed six arches of different heights, entirely constructed of granite without cement. One of the small arches, demolished by the Saracens in 1213, was removed by Charles V. in 1513. Set

up again in wood, it was burnt in 1836, and has not been rebuilt. The traveller has consequently to cross the Tagus in a ferry, at the place where it would be easy to repair a bridge which would last for centuries to come.

Another town called Alcantara, situated in Africa, to the south of Constantine, has a bridge of a single arch thrown over a narrow and deep ravine, washed by a torrent. This site was probably chosen for its picturesqueness. From the bridge the view extends over a beautiful oasis in which 75,000 palms flourish.

All the north of Africa was as thoroughly Roman as France or Spain. Hippona, Carthage, and Alexandria were, under the empire, intellectual centres like Lyons or Cordova. Reflecting upon this great civilisation, which the years have trampled under foot and annihilated, we are forced to avow that all is not progress in the history of humanity.

---

2. PALMYRA AND BALBEK.

As we have seen, the architecture of Western Europe differed little in many respects from that of Rome. In Gaul the imported architecture of Italy had not to contend against a national style of art, for the skill of the Celts was limited to the construction of round houses in the earth, and their gods had only dedicated to them dolmens and covered ways.

But it was quite otherwise in Africa and Asia. In these continents, it is true, Rome succeeded Greece, but the Greek influence was of too short duration to efface the marks of former dominations. Egypt, Assyria, Lydia, Phrygia, Cappadocia, resisted Greece and Rome more by their persistent nationality than by their arms. The Ptolemies and the

Antonines, men who repaired and constructed much in Egypt, adopted the traditional forms of the *pilones* and the *hypogees*, and nothing at first sight more resembles the palace of Sesostris than the colonnades of Philæ or the ruins of Antinoe, the town of Adrian. The Egyptian style was changed only to be degraded.

Asia Minor, on account of the affinity of its peoples and its proximity to Europe, was more docile, and took more kindly to the classic style. The temple of Ancyra, on the walls of which is inscribed the will of Augustus, is a building that would not be out of place in Italy. But the most famous examples of classic architecture in the East are presented by the ruins of Palmyra and Balbek. Although remains of more ancient eras may be noticed in these places, yet the general character of the ruins is Græco-Roman.

Strabo does not mention Palmyra; but Pliny describes it thus:—"Palmyra is remarkable because of its situation, its rich territories, and its agreeable streams. On all sides a waste desert separates it from the rest of the world, and it has preserved its independence between the great empires of Rome and Parthia." But in the year 270 A.D., its queen, Zenobia, made war upon Aurelian, and the massacre of a Roman garrison brought about the destruction of the town. Aurelian rebuilt it, however, and restored the Temple of the Sun, which was one of its ornaments, and after him Diocletian and Justinian further embellished it.

The ruins of Palmyra or Tadmor were situated at an equal distance between the Orontes and the Euphrates. Behind an aqueduct and some high tombs, a pile of upright columns, the bases of which are higher than a man, stretches over a space of more than a mile and a half. In some places

the fall of many of the columns has spoiled the symmetry of the porticoes, the palace, and the temples. In others the columns retreat away from the eye, in lines, like avenues of leafless trees. Overturned shafts, broken capitals, great blocks of stone lying higgledy-piggledy, friezes broken, entablatures, violated tombs, and altars overturned in the dust, are what we see on and around the site of Palmyra. "Architecture," says Volney, "was prodigal of its magnificence in the Temple of the Sun. Along the wall of the square ran a double range of Ionic pillars; the peristyle was formed of forty columns, and the façade resembled the present colonnade of the Louvre. The only difference was that at Palmyra the columns were isolated, while at Paris they are grouped in couples. Everywhere was to be seen the winged disc, the emblem of the sun."

"Balbek," continues Volney, "celebrated among the Greeks and Romans as Heliopolis, or the city of the sun, was situated at the foot of the anti-Lebanon range, exactly at the last undulation of the mountain upon the plain. Arriving from the south, the traveller discovers the ruins of the city, at the distance of a league and a half, behind a fringe of trees, above which rise the white domes and minarets. After an hour's travelling, we arrived at the trees, and found that they were very beautiful walnuts; and after traversing ill-cultivated gardens, by tortuous foot-paths, we found ourselves conducted to the town. Arrived there, we saw a ruined wall flanked by square towers. This wall, which is only ten or twelve feet high, allowed us to peep into the interior of the city, which we found consisted of desolate tracts encumbered with rubbish, which seems to be the distinguishing feature of all Turkish towns."

When the traveller has ascended a terrace formed of enor-

mous blocks, his first glance naturally falls upon six magnificent columns at the end of a vast court, and he finds himself in front of the peristyle of a great temple. As a background we have the mountains, the flanks of which are of an ashy-red colour, and stand out clear against the sky.

These magnificent columns, consisting at most of two or three blocks so perfectly fitted that we can scarcely distinguish the joinings, are more than 7 feet in diameter and over 70 feet in height. Nothing could be richer than their capitals and their sculptured entablatures.

On the left of these pillars is to be seen the most complete edifice in Balbek, namely, the temple of Jupiter Heliopolitanus. Its columns, also of the Corinthian order, are almost as thick as those just noticed, but not nearly so high, nor are they comparable to the others for beauty of proportions. Thirty-eight of them still remain, and the colonnade is entire, with the exception of a portion belonging to the southern façade. Capitals and drums have tumbled, and form a kind of stair of rough stones, by means of which we can reach the platform. One column has slipped without breaking from the height of the rampart, and remains supported against the wall like the trunk of an uprooted tree. As soon as we arrive at the portico we are struck with the richness of the ceiling. Upon the compartments that compose it are designed alternately a hexagon and four lozenges, which enclose heads thrown out in bosses. Some blocks, covered with delicate ornaments, have become detached from the ceiling and fallen to the earth.

Speaking of Balbek, Saulcy says :—"A high terrace, built of prodigious masses of stone, raises its remains above the horizon. The largest block measures 65 feet by 16 in width and thickness. Hadger-el-Kiblah, or stone of the south, is

the name given to it by the Arabs. It would require the force of 20,000 horses to move it, or the concentrated and simultaneous effort of 40,000 men to move it at the rate of three feet in ten seconds. Human intelligence is staggered at the thought of how such stones were conveyed into the desert, and by what machinery they were raised so as to form parts of gigantic edifices. But even greater wonders than these remain to be accounted for. We find that masses as large have been transported at least the distance of three-quarters of a mile; and that at a distance of eighteen feet above these, other masses equally enormous are jointed with all the skilful contrivance displayed by the best workmen in laying stones of ordinary size."

Considering the extraordinary magnificence of Balbek, it is certainly astonishing that the Greek and Latin writers have said so little about it. Wood, in his "Description of London," published in the year 1757, states that mention is made of it by John of Antioch, who attributed the construction of the edifice just described to Antoninus the Pious. Inscriptions which still remain bear witness to this opinion; but the inhabitants prefer to regard it as the work of the genii under the commands of Solomon.

CHAPTER VIII.

LATIN AND BYZANTINE STYLES.

ABOUT the time of Constantine, a number of general laws were imposed upon all architects throughout the whole Roman world. But after the capital had been transferred to Byzantium, the bonds of tradition relaxed, and the Oriental taste, which had introduced at Rome the employment of mosaics and coloured marbles, again rose into the ascendant, and proportions were sacrificed to masses, and beauty of lines to conspicuousness of ornaments. Somewhat later a new style of architecture came into vogue, which, without inventing anything, changed everything. Taking up what was exceptional at Rome, namely, the cupola, architects forthwith made it the chief feature and best-known characteristic of their art. Persian influence, it is supposed, had something to do with the development of this particular style, which was named Byzantine, and of which the church of St. Sophia at Constantinople remains the greatest model.

While this occurred in the East, the West remained faithful to the rules of Vitruvius, and continued to obey the instructions it had received. Even the triumph of Christianity did not bring about a sudden revolution in the arrangement of religious houses. The Christians contented themselves with choosing among the public monuments the form which was most suitable to their religious ceremonies. For instance, the basilica—introduced by the Romans for the transaction of negotiations or of judicial business—an oblong building

divided in the direction of its length into a nave and three aisles, was easily adapted to the Christian service. The aisles were set aside for the accommodation of the men and women; while in the nave the catechumens, the choir, and the minor clergy found accommodation. The upper part of the basilica was raised above the level of the other part of the building by a few steps, and here, when such buildings were converted into churches, divine service was performed. In the middle of the sanctuary was placed the altar; the seat of the prætor became the throne of the bishop; and the priests were accommodated on a circular bench, leaning back at the extremity of the great nave, and terminating in a hemicycle which took the form of an apsis. Subsequently the apsis and the choir were elongated, and the low sides of the choir were extended like arms on each side in the form of a cross. This development took the name of the transept. The square of the transept—the point of intersection of the transept and the nave—was lighted by a tower or lantern. Afterwards the apsis was doubled by the addition of a collateral gallery, and chapels were pierced in the walls round the church. Thus was it that these successive transformations, by means of which the basilica became the Gothic cathedral, operated upon the primitive plan devised by the Roman architects.

The façade of the basilica was decorated by a portico or porch which extended along all its length. In front of the portico extended a square court, whose interior was surrounded by a gallery. In the midst of the court stood a fountain, used for the purpose of ablution, and the gate of entrance was protected by a portal. These accessories have, however, gradually disappeared.

Latin basilicas are no longer found in Gaul; indeed,

there scarcely exist any remains of them there. But Rome presents us with a good number, which, in spite of later alterations, have, in the interior at least, preserved their ancient physiognomy. Such, before its destruction by fire, was St. Paul's beyond the walls, a work of the time of Constantine; such still is St. Agnes beyond the walls, St. Croix of Jerusalem, and eight or nine more. We will briefly examine two or three of these edifices. De Brosses, who saw the basilica of St. Paul, was greatly struck by the view of its five naves or aisles divided by four lines of columns in white Parian marble, in alabaster, in cipolin marble, in breccia, in granite, and in all sorts of precious material. Constantine raised these magnificent pillars as a mausoleum to Adrian. The whole interior shone with porphyry. Theodosius and Honorius increased and aggrandised the edifice; and after them, the Popes accumulated within it their treasures of mosaics, their pictures and statues. Set fire to and destroyed in 1823, it has since been re-constructed according to its former plan, and with equal magnificence.

Sainte-Marie Majeure, one of the most imposing churches of Rome, is clothed exteriorly with all the magnificence and extravagance of the seventeenth century, but its great nave retains all the beautiful style of ornamentation of the antique art. It belongs to the fifth century, having been built by Sextus III. in 432, upon the ruins and with the remains of a temple of Juno. Here it may be noted that the greater number of the ancient churches have been erected on the sites of pagan temples. More than twenty in Rome belong to this class, and all are enriched with the spoils of antiquity. Their pillars were not carved for the use they are now put to: pagan Rome furnished them. At Sainte-Marie Majeure the visitor might believe himself in a Greek temple. He

admires its lofty roof, sustained by two ranges of white columns. "Each of these," says M. Taine, "naked and polished, without other ornament than the delicate curves of their white capitals, is purely and truly beautiful."

St. Clement's is, perhaps, the church that has best preserved all the constituent features of the Christian basilica. In it nothing is wanting. We find the square *atrium* surrounded by eighteen columns of granite; the portico supporting the façade; the great altar, isolated in the apse; and the marble slabs where the clergy took their seats.

At a short distance from St. Agnes beyond the walls stands the circular church of St. Constance. The interior diameter of this edifice is 65 feet. Twenty-four Corinthian columns of granite, standing in couples, sustain the cupola above the great altar. Between the colonnade and the ancient wall are to be seen, on the ceiling, vine-branches and youths in mosaic—the joyous appearance of the youths leading to the belief that the worship of Bacchus here preceded the rise of the Christian religion. The two Constances, the daughter and sister of Constantine, were baptised in this church.

St. Jean in fonte is the church in which it is believed Constantine was baptised by Pope Sylvester. Deprived of its wealth by the barbarians, restored after the Renaissance, this Baptistery of Constantine, as it is called, has evidently preserved its primitive form and aspect. In the midst is the piscina, paved with beautiful marbles, and comprising a vase of green porphyry. The font is covered with a cupola which sustains two superposed ranges of brick columns. At the entry of the chapel there still exist two vast and rich columns of porphyry, of which the entablature is antique.

St. Etienne-le-Rond, to which we next turn, was con-

structed in the fifth century by Pope Simplicius, with the débris and on the site of a temple of Claudius. This religious edifice is little more than a baptistry. From the central part of the building, which is its highest part, rises a conical roof, relieved by another which surmounts the collateral aisle. Two circular ranges of columns, of different styles of architecture, support and divide the edifice. Originally there was a third, but it was destroyed in the fifteenth century.

Turning eastwards, we find that at Constantinople the long naves of the religious edifices are metamorphosed into a series of square chambers surmounted by cupolas. Here the proportions of the antique basilicas are altered and lost; but great beauties make up for the loss. The boldness of the cornices, the powerful relief of the supports, the pendants and corbels which connect the square nave with the circular cupola, the unity of the entire edifice, all parts of which bear upon the central mass, supporting and sustaining it, are the chief features of Byzantine art, and make it both original and captivating. The barbarity of the capitals in which the Corinthian acanthus degenerates into a meagre fillet, the strange mixture of figures in mosaic on a ground of gold which replace the breathing sculptures and the delicate ornaments of the ancient temples, are faults that are forgotten in the harmonious impression of the whole—a harmony which has caused many travellers and artists to prefer St. Sophia's at Constantinople to St. Peter's at Rome.

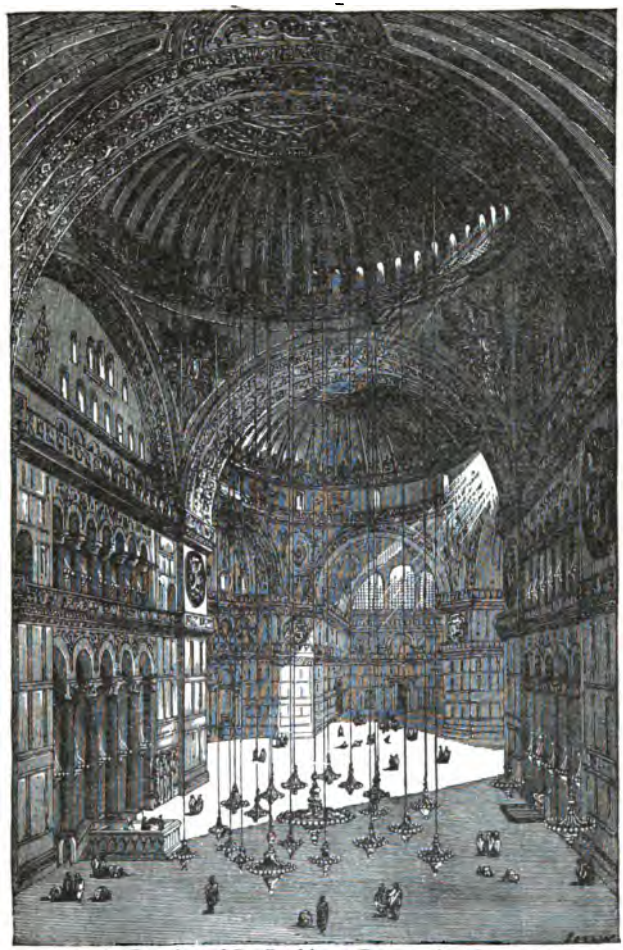
At the present day there remains no trace of the first St. Sophia, built in the fourth century by Constantine. After having been frequently burnt, it was totally reduced to ashes in the year 532. Justinian caused it to be rebuilt by

Anthemius de 'Tralles and Isidore de Milet. Ephesus, Palmyra, Pergamos, and a multitude of cities and temples were despoiled to enrich it, and furnished to the architects columns of porphyry and of granite, which were prodigally lavished upon its interior. Ten thousand workmen were employed in the construction of its brick ramparts, vaults, and mosaics. Its peculiar beauties were such that, notwithstanding the mutilations to which the Turks subjected it in 1453, we can still appreciate the proud exclamation of Justinian, referring to the Temple of Jerusalem—"Solomon, I have surpassed thee!"

The proportions of St. Sophia are by no means gigantic. It measures only 266 feet by 248. Its exterior is somewhat naked, and is disfigured by a number of buildings which hide the general outlines. Between the buttresses—raised by Amurrath III. to sustain the walls shaken by successive earthquakes—tombs, schools, baths, stalls, &c., are crowded. But putting out of consideration this confusion, and forgetting the four hybrid minarets with which conquerors have flanked the great mass itself, the spectator cannot but admire the beautiful curves of the apse, and the central cupola, whose elliptical shape exaggerates its size.

Two long covered porticoes lead up to the body of the church, the second of which communicates by nine gates with the interior. So soon as he enters the building, the visitor takes in at a glance the entire conception of the architect, and is forced to render homage to the genius which, casting aside the restrictions of the classic school, combined in such perfect accord the circle and the straight line. Around the basilica, up to the height where the vault springs, are vast rows of seats, supported by richly decorated circular galleries. Nothing can equal the majesty of these porticoes,

Univ. of California



Interior of St. Sophia at Constantinople.

UNIV. OF
CALIFORNIA

in the Corinthian capitals of which animals, allegorical figures, and crosses are interlaced among the leaves.

St. Sophia has lost all its ornaments. The iconoclastic zeal of the Moslem has left it nothing but its precious pavement, which was always concealed under carpets. The statues have been removed; the altar, made of an unknown metal, which was a mixture of gold, silver, bronze, iron, and precious stones, melted together, is now replaced by a slab of red marble. Of the mosaics on a gold ground, with which the building was at one time enriched, only the four gigantic cherubim have been preserved, but the heads of these figures are concealed under a rose of gold—the reproduction of the human face being a horror to the Mussulman. At the end of the sanctuary may confusedly be perceived the lines of a colossal figure which time has not yet obliterated. This represents Sophia, the goddess of wisdom and patroness of the church, who, under her semi-transparent veil looks down upon the ceremonies of a foreign worship.

In the West, Byzantine art took root first in the possessions of the Greek Emperors in Italy. The church of St. Vital, at Ravenna, was constructed in the sixth century, at the same time as St. Sophia. This religious edifice is small and octagonal. Its cupola is supported upon eight large pillars resting upon eight apses; and between the pillars and the apses runs an aisle, from which each apse is separated by three arcades. A gallery runs round the church, above which springs the cupola, pierced by eight windows.

St. Vital is removed still further than St. Sophia from classic architectural traditions; none of its ornaments having been borrowed from the ancient monuments. Certain capitals distinctly recall the Corinthian; but the volutes

and the foliage are very far from being pure. Most of them are square at the top, and assume by insensible gradations the circular form. Sculptured trellis-work helps to redeem the poverty of the outline.

Like all the Byzantine constructions, St. Vital has, in spite of its limited dimensions, an aspect of decided grandeur and character. Very beautiful mosaics and marbles formerly lent to it a splendour of which it is now deprived, the choir alone having preserved its primitive decorations. Unfortunately some one has painted the cupola with a still life illusion, and visitors are shocked by seeing in the inside of the vault a representation of a Corinthian colonnade.

The church which Charlemagne constructed at Aix-la-Chapelle, and which he considered superior to all the churches in the world, is but a barbarous copy of St. Vital. It is a curious specimen of the poor talent and depraved taste of the Western architects of that period. Astonishment need not be felt that Charlemagne, one of the most intelligent men of his time, knew much less about architecture than a modern school-boy. At that time it was difficult to find a workman who could carve a capital or even square a monolith. Such was the poverty of skilled labour, that the common expedient was to rob an old edifice in order to furnish material for a new one. Proceeding upon this principle, Charlemagne caused certain columns to be transposed from Ravenna to Aix-la-Chapelle for the adornment of this church, which is interesting only for the memorials it contains, being a kind of historical sanctuary.

"St. Mark of Venice," says Théophile Gautier, "is a St. Sophia in miniature, a reduction on the scale of an inch to the foot, of the immense structure of Justinian. Nor is this

to be wondered at. Venice, which a narrow sea only separates from Greece, was always in familiarity with the East, and its architects sought out and reproduced the type of church which was then considered the most beautiful and rich in the Christian world. St. Mark was commenced in 979, under the Doge Peter Orseolo. Its architects had the advantage of seeing St. Sophia in all its integrity and splendour, before it had been profaned by Mahomet II., in the year 1453."

Under the five small domes at the sides of the structure, open up the seven porches of the façade, of which five lead into the central atrium, and two into the exterior side galleries. The depth of these portals is garnished with columns in cipolin and pentelic marbles, in jasper, and in other precious materials. "The central door, whose outline cuts the balustrade of marble that runs above the other arcade, is, as it should be, richer and more ornate than the others. Besides the mass of columns in antique marble which support it and give it importance, three tiers of sculptured ornaments exquisitely carved bring out into bold relief its outline by their projection. Above this porch are placed the celebrated horses of Lysippus, which for a time ornamented the *Arc du Carrousel* at Paris. Mosaics upon a gold ground shine on all the porches in the midst of enamels, and numberless figures of every kind."

The *Atrium*, whose round vault presents in mosaics the history of the Old Testament, leads to the nave by three bronze gates ornamented with silver, which it is said belonged originally to St. Sophia.

"Let us enter," says an observer, "into the interior. Nothing can compare with St. Mark's, neither Cologne, nor Strasbourg, nor Seville, nor even Cordova with its mosque.

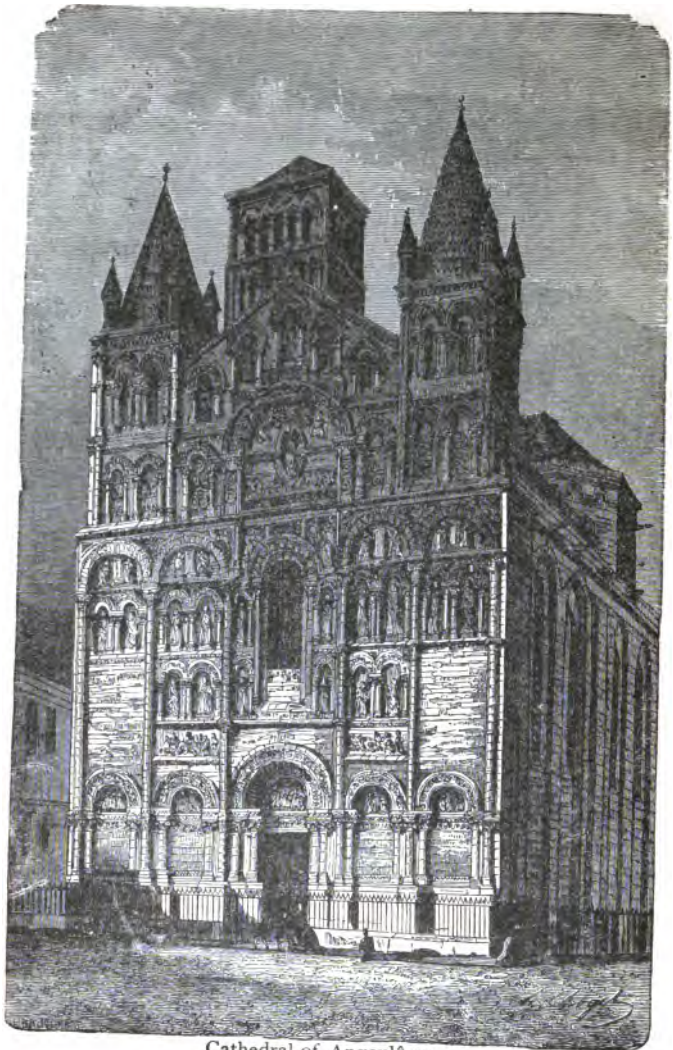
Its effect is surprising and even magical. The first impression conveyed is that of a cavern of gold encrusted with precious stones which are at once splendid and sombre, sparkling and mysterious.

"Cupolas, vaults, architraves, and walls are covered with little cubes of gilt crystal of unique form, among which the rays of light sparkle like the scales of a fish. Where the gold ground terminates, at the height of the columns commences a clothing of the most precious and varied marbles. From the vault descends a great lamp in the shape of a cross of four branches, whose points are decorated with lilies, and which hangs from a ball of gold filigree. The effect is marvellous when the lamp is illuminated. Six pillars of alabaster with capitals in bronze-gilt of Corinthian pattern support elegant arcades, around which runs a gallery the whole length of the church.

"In the area is the choir with its altar upon a dais between four columns of Greek marble carved, like a piece of Chinese ivory-work, by the most patient industry. The altar-screen, which is called the Pala d'Oro, is quite a confusion of wonders It blazes with enamels, cameos, pearls, sapphires, silver and gold, while pictures in precious stones represent scenes in the life of St. Mark. It was made in Constantinople, in 976. Finally, in the circle behind the great altar is a colossal figure of the Redeemer."

St. Front of Perigueux is a reproduction of St. Mark's, as St. Mark's is a reproduction of St. Sophia. It is executed upon the same plan *minus* the vestibule; and the dimensions of both are almost the same. But in this instance one looks in vain for the wealth and splendour of the model. St. Front is poor and naked. Under the sad stone-colour of its walls there are no mosaics. And yet the

Univ. of
California



Cathedral of Angoulême.

edifice is grand in character. So much power is there in a simple arrangement conceived in a great spirit!

After the erection of St. Front, cupola-churches multiplied themselves throughout France; but their architects abandoned in their construction the arrangement and style of the Byzantine works. Even at this early period a new character began to be manifest in the architecture of the West. In St. Front itself we find that Byzantine traditions are departed from, and in its arches, instead of the round circle of the East, we begin to notice a tendency to point the arch. The pointed arch is the exclusive feature of the Gothic style, and from its introduction dates the era of French architecture. French architects in modifying their works, and adapting them to the colder climate of the West, changed the plan, aspect, and ornaments of their churches. Sculpture reassumed its place upon the capitals and the walls, instead of the many-coloured image-work of the mosaists. Churches, in short, became at the same time more severe and more ornate.

The cathedral of Angoulême (1017—1120) is one of the most celebrated types of this transition between the Eastern or Byzantine and Romanesque order or Western style. To the former belong the three cupolas that cover the nave; to the latter the general form of the building—its Latin cross, its transepts and apses, its historic frieze, its crown of double arcades, and its corbelled cornice. As in St. Front, the arches that sustain the cupola are narrowed at the top. Moreover, there is no trace of the Byzantine school in the pillarettes flanked with columns, or in the carving of the capitals, which consists of leaves and grotesque figures of animals.

The cupola placed at the crossing of the transept is

the same in diameter as the cupolas of the other churches we have mentioned; but raised as it is upon a drum which towers high above the roof, it looks larger than it is in reality. It is pierced with rich arcades of double columns, in four of which are openings for windows. The façade is a great square wall covered with bassi-rilievi, and divided horizontally by three rows of false arcades. Although it is no more than 60 feet high, its great proportions give it a majestic and powerful appearance. On the left flank we admire numerous windows in the centre of a high tower, recently restored. Of all the square towers which the traveller sees between Poictiers and Bordeaux, this is one of the most beautiful and the best situated. From a distance it looks heavy, rising as it does by numerous storeys from an irregular tumulus; but this effect vanishes when it is observed close at hand. The town, in fact, crowns an abrupt height above a smiling and verdant valley, wherein rich pasturages alternate with considerable manufactories.

CHAPTER IX.

ORIENTAL ARCHITECTURE.—I. ARAB STYLE.

"THE art of the Arabs," says Lamennais, "is like a bright dream. It is a caprice of genius, worked in rich work of stone, in delicate filigrees, in light fringes, in flowing lines, in lace-work, amidst all which the eye loses itself in pursuit of a symmetrical form which it is about to grasp, when the fair illusion changes into other beautiful complications of forms, escapes, and is dispelled. The various forms to be found in this species of architecture look like a strong vegetation—a vegetation luxuriant and also fantastic. Arab art is not nature; it is a dream of nature." Still, if the Arabs rioted in fanciful decorations, they at the same time were careful to construct their edifices on the simplest and most natural plan.

In dimensions and colours almost all their mosques are alike. Umbrageous courts of trees, refreshed by fountains surrounded by porticoes, stand in front of these sanctuaries which form halls—square or round—surmounted by cupolas. At the four corners rise beautiful minarets. The interiors are simple in structure, all the ornaments consisting in arabesque painted upon the wall, and in caligraphic inscriptions taken from the Koran. Lamps, ostrich-eggs, and bouquets of flowers hang in great numbers from the wires that stretch from one pillar to the other across the interiors. The flags of the flooring are concealed by rich carpets. "The effect," says Lamartine, "is simple and impressive.

It is not a temple in which a god dwells; it is a house of prayer and contemplation where men assemble to adore the one immortal God."

One of the most ancient and celebrated religious edifices of the Arabs is the mosque raised by Omar in Jerusalem, within the wall of Solomon's Temple, and exactly upon the rock where they say Jehovah spoke to Jacob. It is called El-Sakhra, in memory of that event, and is octagonal in shape, each side being decorated with seven arcades of pointed arches. A second range of arcades, narrower and inclined inwards, supports a beautiful dome of copper, formerly gilt. The walls are covered with squares of blue enamel, and the gates, ornamented with beautiful columns, lead into the sanctuary, which is covered with white marble. Visitors walk upon a rich many-coloured pavement, between two circular ranges of pillars composed of grey marble, taken from Bethlehem and the Holy Sepulchre. In the seventeenth century, Mr. P. Roger counted in the mosque no less than 7,000 chandeliers carved in copper or in iron gilt. All round the mosque branch off twelve porticoes placed at the same distance the one from the other, and irregular, like the cloisters of the Alhambra. They are composed of three or four arcades, and sometimes these arcades support a second range. This notable edifice was founded in the seventeenth century, and was embellished by the Califs Abd-el-Malek and El Louid. After the Crusades it was converted into a church by the Christians, but some hundred years later, Saladin gave it back to Mahomet.

In early times Moslem art extended into Africa. Cairo, a town entirely Arabic, contains very ancient and very rich mosques, that of Ebn-Touloun especially being deserving of attention. It dates from the ninth century (870). Ahmed-

Ben-Touloun, the founder of a brief dynasty, who caused it to be constructed and gave it its name, wished its porticoes to be sustained by 300 columns; but the architect was unable to construct such a great number. The mosque is built of brick, and stucco is used to conceal this material.

The sanctuary is circular, and its dimensions are very limited, the court and the porticoes actually constituting the mosque. The enclosing wall is pierced with nine gates. Around the court, above the porticoes, runs a high and beautiful frieze, which crowns a highly ornamented cornice. The minaret and the cistern—the usual accompaniments of every mosque—are kept, in this case, outside the wall, opposite the sanctuary.

We must not quit Cairo without visiting the Valley of the Califs, as the religious art of the Arabs shows itself alike in their temples and their tombs.

In this Valley of the Califs, Mussulman dynasties repose in a marvellous necropolis at the foot of Mount Mokattam. Touloun and Biburs, Saladin and Malek-Adel, rest in a palace in which Oriental architecture has abandoned itself to the most delightful caprices. It is quite a Gothic town, with an air of extraordinary grace, and of devotion without gloom. The mosques are mingled with the tombs, and the minarets—symbolical of hope—rise from the midst of funereal cupolas.

Nowhere have the Arabs left greater proof of their architectural genius than in Spain, where their civilisation flourished for seven centuries. The Alhambra, which is perhaps one of their greatest architectural marvels, must at once occur to every reader. Specially worthy of admiration is the Court of Lions, belonging to this edifice—a quadrangle 98 feet by 65 feet. This court is surrounded

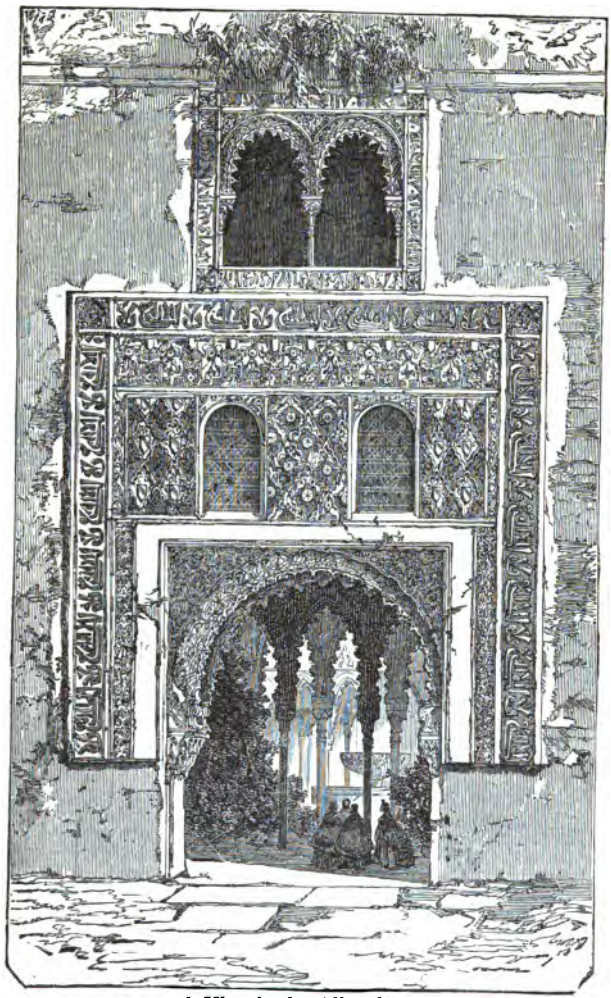
by a peristyle of light columns, ornamented on two sides by advanced porticoes, like the bold portals of some Gothic churches; and is carved with wonderful accuracy, skill, and elegance.

In presence of innumerable vistas of courts and chambers, fantastic decorations of structures resembling the tents of the desert, and terminating in conical vaults, the spectator stands immovable and mute, and thinks himself transported to the entrance of one of those fairy palaces of which we read in Arabian tales.

"Airy galleries," says Chateaubriand, "canals constructed of white marble, and bordered by citrons and flowering orange-trees, fountains and solitary courts, present themselves on all sides before the eyes of the traveller, and across the long vaults of the porticoes he perceives other labyrinths and new enchantments. The beautiful azure of the heavens reveals itself between the columns that sustain a chain of Gothic arches. The walls, covered with arabesques, seem to the view like those cloths of the East which are broidered in the leisure of the harem by the industrious hands of a female slave. Everything luxurious, religious, warlike, seems to breathe in this magnificent edifice. It is a sort of bower of love in a mysterious retreat, in which the Moorish kings enjoyed all the pleasuers and forgot all the cares of life."

The decorations of the Alhambra consist of varnished tiles of all colours—yellow, red, black, green, and white—forming mosaics which covered the walls with a kind of carpet-work in flowers, knots, zig-zags; and inscriptions, sculptured in low relief upon the stucco and plaster. Nothing, for instance, could be more charming than the walls of the Halls of the Ambassadors, inscribed with verses of

UNIV. OF CALIFORNIA



A View in the Alhambra.

the Koran, and stanzas of poetry in the Arabic caligraphy; while the ceiling of cedar-wood, a marvel of carpentry, presents an actual problem of geometric forms.

If we except a number of columns, some flags, vases, basins, and little niches for placing Turkish slippers, there is not perhaps a single piece of marble employed in the interior decorations of the Alhambra. The same fact is to be observed respecting all the Arabic monuments of Cordova, Segovia, Seville, Valladolid, and Toledo. Stucco and plaster were found to suffice for all the Moorish ornamentation.

The splendid and famous mosque of Cordova is composed of nineteen colonnades or porticoes in horse-shoe arcades. In front of the façade is a court surrounded with galleries, commenced in 786. This edifice, which was as dear to the Arabs of Spain as St. Sophia was to the Byzantines, and St. Peter's to the early Christians, was restored and enriched at different times. It received extensions and additions as late as the tenth century. Its height is not extraordinary, being only 30 feet from its base to the woodwork at the roof; but its horizontal dimensions are colossal. The mosque properly so called is 400 feet long by 366 broad. Isolated columns to the number of 646 support the arcade, exclusive of the engaged columns, or those that form the three porticoes of the court. Formerly they were much more numerous, before the mutilations which the building has from time to time suffered, took place.

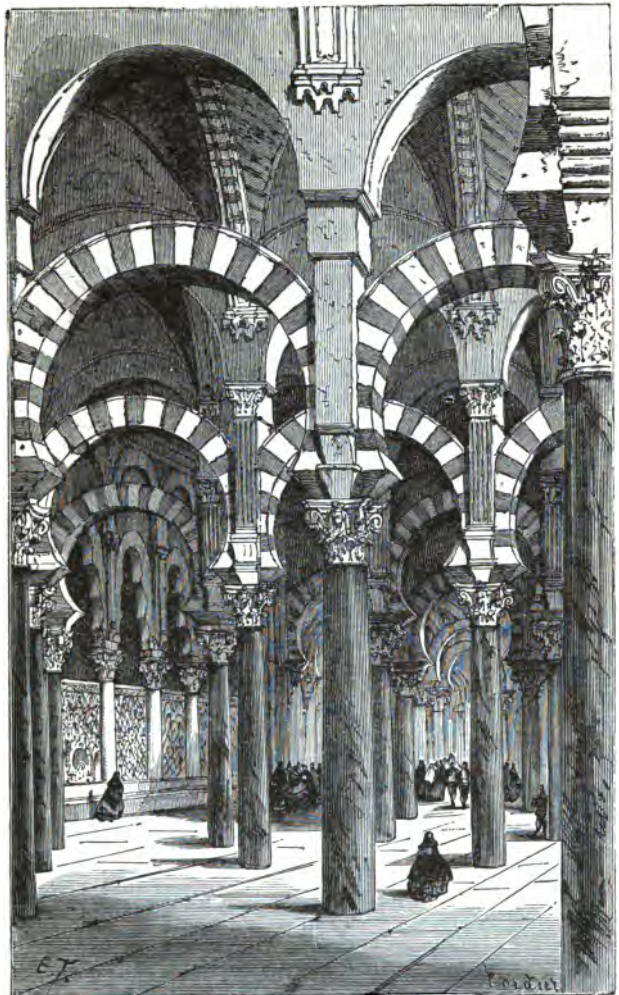
Exquisite is the characteristic of all Arab conceptions. While the walls of the old towns of the north of Spain are heavy and coarsely built, like the defences improvised by a people in extremities, the Moorish fortifications are light, graceful, and constructed with true artistic skill. For

instance, the towers of the walls of Seville, embellished with brick lines, courses of white stone, and Arabic inscriptions, were so carefully built, and with materials so well chosen, that their edges and ridges are still as sharp as when they were first constructed. The length of the walls is about six miles. Of their fifteen gates the most have been reconstructed and modified; but the well-known "Gate of Cordova," among others, has preserved its high square fortress. In the neighbourhood of this gate there is an aqueduct of 400 arches, eighteen miles in length, which shows that the Arabs were equal to the Romans in the conveyance of water from place to place.

It is in Spain that Mussulman art has displayed its boldest and most original invention. In the East it had often been inspired by Byzantine models; and it is not therefore astonishing that St. Sophia, that queen of mosques, was taken as the pattern for many of the lesser religious sanctuaries of Constantinople. The Turks brought with them lessons from Persia, which had some influence upon Byzantine architecture. The mosque of Achmet, of which Gautier gives us a pleasing picture, was entirely vaulted in semi-domes, which supported a central cupola. In front of it was a court, surrounded by a quadruple portico, supporting columns with black and white capitals, and with bases of bronze.

"The style of all this architecture," says he, "is noble and pure, and recalls the best epochs of Arabic art, although its construction does not date further back than the seventeenth century. A gate of bronze gave access into the interior of the mosque. What struck us first were the four enormous pillars, or rather fluted towers, which bore the weight of the principal cupola. Fifteen men, it is said,

Univ. of California



Interior of the Mosque of Cordova.

UNIV. OF
CALIFORNIA

could not embrace them. These pillars, with capitals carved in stalactites, were surrounded at middle height by a plain band covered with inscriptions in the Turkish character. They wore an air of robust majesty and indestructible power."

The construction of the minarets, encircled with balconies wrought like bracelets, was the occasion of a curious debate between the Sultan and the Imam of the mosque. During the construction of the mosque the Imam cried out against the impiety and the sacrilegious pride of giving it the same number of minarets as St. Kaaba, and said that no other mosque should dare to rival the Holy Kaaba in splendour. The works were in consequence interrupted, the Sultan not knowing what to do. He wished to place six minarets on his own mosque, but he could not erect them because that was the number of the minarets of St. Kaaba, which it was sacrilege to rival. At length he fell on an ingenious plan to shut the Imam's mouth. He caused a seventh minaret to be built at Kaaba.

---

2. INDIA.

"Who does not know Puri? Puri, whose lofty temple serves as a landmark to navigators—Puri, the grand rendezvous of the people, the ancient dwelling-place of the gods! Come to Puri, come; you will there see marvels without number!" With this proclamation the Brahmin missionaries travel to the remotest tribes of India. Puri is situated 100 leagues from Calcutta, upon the coast of Bengal. It stands in the midst of a sacred country, and in this sacred town is situated the famous Temple of Juggernaut, the very sight of which is said to bring a blessing upon the head of

the spectator, to cure diseases, and ensure paradise to those that remain upon its sacred soil.

Here twelve times a year devotees suspend themselves upon sharp hooks, throw themselves upon mattresses bristling with poignards, or have themselves crushed under the wheels of the great car which bears the Brahminic Trinity. Those who witness this immolation, gash themselves 120 times (the sacred number) with knives, or content themselves with piercing their tongues, out of pure ecstatic joy. In these ceremonies the proud Brahmins mingle humbly with the lower classes, whom they consider impure. So great is the majesty of Juggernaut that all are equal before him, and all social distinctions disappear in presence of his immensity.

The Asiatic Society has presented the French Government with a model of the temple and the processional car of Juggernaut. This precious specimen of Indian art of the Middle Ages (1198) is placed in the Louvre at Paris.

The temple, or rather temples (for there are more than fifty) are enclosed by a rampart forming a square of 6,500 feet. Each side is pierced by a large gate. Opposite the Gate of Lions, which is held in great veneration because it is supposed to serve as a passage for the gods, rises, in a street 130 feet wide, a fluted column of black basalt, 42 feet high, surmounted by a statue, and forming by its elegance a striking contrast to the stupendous enclosure.

Above the entrance rises a square tower of five storeys. Upon its platform is a small pyramid fronted by a sort of terrace, guarded by two sculptured animals. At the side an opening allows us to perceive two hippopotami upon the summit of an interior edifice. In a second court rises a

grand gilt post bearing a gilt clock, and a little circular temple with a dome supported by columns. Here is to be seen all the confusion and wealth of Ellora. Besides these, there are winged genii, gods, goddesses, and fantastic animals sculptured at the gates of the temples, upon the walls, or at the summits of the pyramids.

Upon the flanks of the enclosing wall are other two towers. At the bottom there are superb square pyramidal structures of eleven storeys, rising to a height of 210 feet; with ground-floors 130 feet in extent. Columns, pilasters, and an infinite number of statues, ornament the walls and surmount the terraces; while in the interior are galleries and colonnades. It is in this temple that the great platform called the Throne of Jewels is found; and here, exposed from age to age, are huge images of painted wood, representing Juggernaut, Balarama his brother, and Chouboudra his sister. Juggernaut has great round eyes, a pointed nose, black visage, and a wide mouth of the colour of blood. It is he who, from the summit of a tower of 70 feet, presides over the immolation of the faithful.

The Temple of Juggernaut is a perfect type of that monstrous Indian imagination, which unfolds itself in strange beauties in the midst of blood and cruelty.

The Afghan and Mongol invaders engrafted on the Hindu fecundity the elegance of the Mussulman. From the fifteenth century an art rivalling the Moorish art continued to enrich Bengal with palaces, tombs, and mosques, of which scarcely anything but the ruins are to be seen. We can only glance at Delhi, where three distinct architectural types may be seen—that of ancient Hindu Delhi, which has almost entirely disappeared; that of Afghan Delhi; and that of modern Delhi, which is the work of the Mongols, or, in

other words, of the Tartar Turcomans, who are of the same stock as the Turks.

Among the temples, palaces, fortresses, and tombs of Delhi, the forsaken remains of which cover the soil, we may notice here the pillar or minaret of Koutab, a word signifying the polar star of religion—the name of the first Afghan sovereign. The base of this singular monument is almost 143 feet in circumference. Its height is said to have been 312 feet before it was struck with lightning. At the present time it is 208 feet. It is constructed of stone, gradually diminishing in width from the base upwards, and divided into five storeys, crowned with galleries admirably carved and ornamented with colossal Arabic inscriptions in relief.

At a little distance shines the splendid dome of the college of Akbar. Here is the vast mausoleum, in white marble, of Shamshadin-Altanish; here are the tombs of the Nizam-ad-Din and the Begum Jehanira; here also is the sepulchre of Houmaroun, a beautiful edifice in granite covered with marble, constructed with the simplicity of the best Roman style, and of which the vast dome, in white marble, overlooks the gardens, towers, minarets, and circular walls that enclose it.

Days would not be sufficient to visit all the monuments of Delhi; but we must mention the Jumna-Mosjed, which is, in the opinion of most travellers, the most important mosque in the world. It is a vast monument, constructed of red stone encrusted with beautiful white marble, which covers only the domes. Its square court in front is surrounded on three sides by covered colonnades, across which we see the town and the trees. It can contain 12,000 persons, and it is filled with the faithful on the day when, each year, the king comes to be present at the last hour of the Ramazan.

We here notice a superb flight of steps, and some minarets 162 feet high. According to common opinion, the Jumna-Mosjed dates from 1560.

---

3. PERSIA AND CHINA.

The imposing ruins which the art of the Persians has left us, scarcely prepare us for the marvellous lightness of most Persian structures. The ancestors of the Persians gave proof of their native energy by the majesty of their colonnades and their stairs. An enervated and refined people, inhabiting a very hot country, thought only of air and perfume in the construction of their great edifices. Accordingly we find in Persia the most aërial of all architectural styles. There are to be found collections of slender columns, and immense open saloons, shining with all the colours of enamels. There also, sown with flowers and verdure, are to be found those painted galleries and pavilions which are described in the pages of the "Thousand and One Nights."

Ispahan surpasses the chief works of the Arabs in elegance, and transcends the churches of Genoa or Rome in richness of interiors. Neither the grace nor the ornamentation of its buildings interferes with their grandeur. The Mosque of the Congregation, the largest and one of the most ancient in all Persia, occupies a space of forty acres. It appears to have been constructed between 1000 and 1200 A.D. Its figure is square, covered with seven domes and sustained by forty pilasters. The lower part of its walls, to the height of 6 feet, are of porphyry, waved and marbled. Above that height squares of enamel form the coating, both outside and

inside. Among the verses and proverbs which are written on the frieze and the cornices, Chardin notices this inscription: "This is the frontispiece of Paradise. Neither the avaricious nor hypocrites can enter here."

The great dome is more than 100 feet in diameter. It is named the Choir of the Temple, and in front of it is a spacious court surrounded by arcades supported by large pilasters. A large square basin stands in the middle of the court, intended for ablutions; and fountains and reservoirs everywhere abound, even under the cupolas.

The Royal Mosque, raised by Abbas the Great at the end of the sixteenth century, upon the principal square of Ispahan, surpasses the one we have mentioned in richness, without, perhaps, equalling it in nobleness and dimensions. Its forms are less simple, the basins, courts, and cupolas being all polygonal in shape. Imagination itself seems almost lost in the attempt to enumerate the long porticoes open to the air of heaven, the balconies, the fountains, domes, and minarets. Precious metals and stones of the loveliest colours, porphyry, jasper, plates of solid silver, gildings, blue enamels, and varnished tiles, are profusely used in the portals and walls. A large pavilion, upon arcades, covered by a cupola so high that it can be seen from a distance of twelve miles, occupies the central part of the mosque, while four other domes crown the neighbouring porticoes. The whole structure is constructed of stone covered with painted bricks.

Without doubt, the most magnificent of the thirty-seven palaces which the Sophis possess in Ispahan is the Royal Palace. Few structures in the world equal it in extent. It is a vast succession of halls, kiosks, and open pavilions, situated amid gardens. In the Saloon of the Stable, on great

fête-days, the horses of the king, harnessed with precious stones and with bridles of gold, are exhibited. The Saloon of Vases, on the other hand, is carpeted with a fabric made of gold and silk. It is the gayest and most delightful of places, and is filled with vases, cups, bottles of all sorts, in gold, silver, porcelain, crystal, agate, jasper, onyx, and coral.

The Persians did not attend less to works of utility than to those of pleasure, as may be seen from the Bridge of Jalfa. This bridge is 360 paces long and 13 wide. It is flanked with walls of bricks, and pierced from side to side with galleries. Two exterior cabinets suspended upon the water mark the middle of the bridge. Thirty-four arches of grey stone, harder than marble, support the structure. They are constructed upon a sub-basement that rises so high that one can walk across it when the water is low. There are so many galleries and arcades above arcades in the bridge, that eight persons going in the same direction might each have an arcaded path for himself.

Such are some of the wonders of Ispahan; but since the last century, Teheran has been the capital of the empire, and all the marvels of the former city are falling into ruin.

Chinese architecture, which is still more varied and more capricious than Persian art, would present us with objects of admiration, if it did not also quite set aside our tastes and run counter to our habits. Two hundred years before our era this country had raised a wall 600 leagues long, flanked with towers, and so wide that six horsemen could ride abreast on its summit. About the same time it had spanned with a bridge of a single arch a valley 520 feet wide; and it was familiar with viaducts and suspension

bridges. In the seventh century a prince caused to be placed before the gates of his palace two columns in copper and iron, 114 feet high, and erected upon bases of metal. When the introduction of Buddhism into the country necessitated the use of high towers, the Chinese achieved marvels in this kind of structure. For example, the great Porcelain Tower at Nankin, built in the fifteenth century on the site of a former one, dating from the fifth century, attains a height of 350 feet. Originally, eight chains of iron, falling from the summit at each of the eight angles, sustained seventy-two brass bells. Eighty other bells hung from the roofs of the nine storeys, which were ornamented also with 128 lamps. From the summit rose a great mast, surrounded with a spiral cage in open ironwork, and crowned with a globe of an extraordinary size. This Porcelain Tower is so named because of the brilliant porcelain ornaments with which its walls and roof are decked.

We cannot quit the extreme east without glancing at the art of the Mexicans and Peruvians, who are supposed to have come from Asia. No date can be given to their Theocallis or their ruined towns, yet two distinct epochs can be assigned them. One of these was prior to the Incas of Peru, and the second comprises the later centuries of the Middle Ages. All the buildings of the latter period have a character in common, and appear to have been of a pyramidal form raised upon steps. Their appearance is gigantic, their materials enormous, and their decoration monstrous. Palenque, Cholula, Tiaguanaco, and all the remains which explorers have discovered, look exactly like the works of Egyptian savages. The pyramid of Xochicalco is composed of five square buildings placed the one above the other, each decreasing in size as they ascend. It is

pierced with gates and covered with sculptures. A tube traversed it from top to bottom, which was used to conduct the rays of the sun when in the zenith, and cast them upon a sort of subterraneous altar. Here, as among many other nations of high antiquity, the sun was the great object of worship.

CHAPTER V

ROMAN ARCHITECTURE (1000—1250).

In the pages of the old historian Raoul Glaber, it is stated that the year 1007 was supposed by the superstitious people who lived prior to that time to be the end of the world. The general belief in this idea had the result of bringing into existence a great number of churches. Old ones were demolished, though still useful, and new ones founded. Some unknown genius about this period solved the great problem of applying the vault to the great nave. As a plain arch the vault was known to the Romans, who even knew how to construct four vaults intersecting each other in the centre, but they only employed them to cover small spaces.

The Latin people had their churches burnt down by the Normans, and these had to be reconstructed upon a new principle. Before vaulting the transept they proceeded to vault the aisles, and then the nave. This process, though simple in appearance, was a revolution in the art of building, and marked the inauguration of a new architecture, namely, the Romanesque. From this application of the vault to spaces of more than 50 feet flow all the innovations of the eleventh and twelfth centuries. The grotesque ornamentations and manifold encroachments of the Gothic and Romanesque styles were simply the necessary supports to the vaults. The pointed arch, as being much more solid, was the last innovation. It is a mistake to suppose that the

pointed arch was originally Gothic—it was Romanesque. During the eleventh and twelfth centuries the products of

The Cathedral at Spires.

architecture were of almost unheard-of variety. Romanesque architecture received an early welcome in the

Valley of the Rhine. The Cathedral of Spires, built between 916 and 1097, is the largest church in Germany. Its length is 478 feet. Like the cathedrals of Worms, Bonn, and Mayence, it belongs to the family of double-apsed churches—magnificent products of the early architecture of the Middle Ages, which are rare in Europe and found mostly in the Rhine Valley. Terminated at both extremities with circular spaces, these churches have no façade, the want of it being compensated for by lateral portals.

At Spires, the two apses support two cupolas, flanked each with a like number of towers. The interior presents a somewhat severe aspect, prominent among the decorations being twelve square pillars, which separate the lofty nave from the two aisles. In the midst of the nave upon the floor are four stone roses, which mark the place where St. Bernard preached the Crusade, in 1146. A dozen steps conduct to the nave of the King's Choir, under which is the imperial vault, beneath which lie nine emperors.

Under the eastern part of the cathedral is a crypt supported by twenty short, massive pillars. Here are to be found baptismal fonts of the eighth and ninth centuries, and a tomb of Rudolph of Hapsburg, with a crowned statue.

Returning to France, we find many early Romanesque buildings in the middle and south of that country. At Toulouse, Poictiers, and St. Gilles, for instance, the Romanesque is seen blent with the Byzantine; while at Saintes and Caen, on the other hand, there are pure specimens of the former.

St. Etienne of Caen was commenced, in 1064, by

Crypt of St. Eutrope de Saintes.

William the Conqueror. It is built on the plan of a Latin cross, the portal presenting three gates on the ground-floor, above which are two ranks of bays with round arches. On each side of the gable rises a high tower, terminated by a more recent addition. The whole building wears an aspect of austere elegance and monastic severity.

St. Eutrope de Saintes, on the other hand, has in its architecture more grace and something of nobleness. Its vault is in the form of a cradle. From the exterior we see a high wall in Romanesque, which is admired for the elegance of its engaged colonnades. The storeys are divided by friezes enriched with circular flowers. There is still to be traced at the end of the wall a beautiful rotunda, with bays highly ornamented. This was the lateral chapel of the primitive apse.

The crypt of the church prolongs itself under the choir and apse, and admits light by the semi-circles which ornament the base of the building. Entering from the left side of the church, we remark misshapen pillars which belong to the fifth century, as an inscription on their capitals proves. When the eyes become accustomed to the dim light of the crypt, the heavy, massive, severe lines of its architecture begin to disentangle themselves from the shadows, and the impressiveness of the vault commands the respect of the visitor. Here he is face to face with a structure not later than the eleventh century.

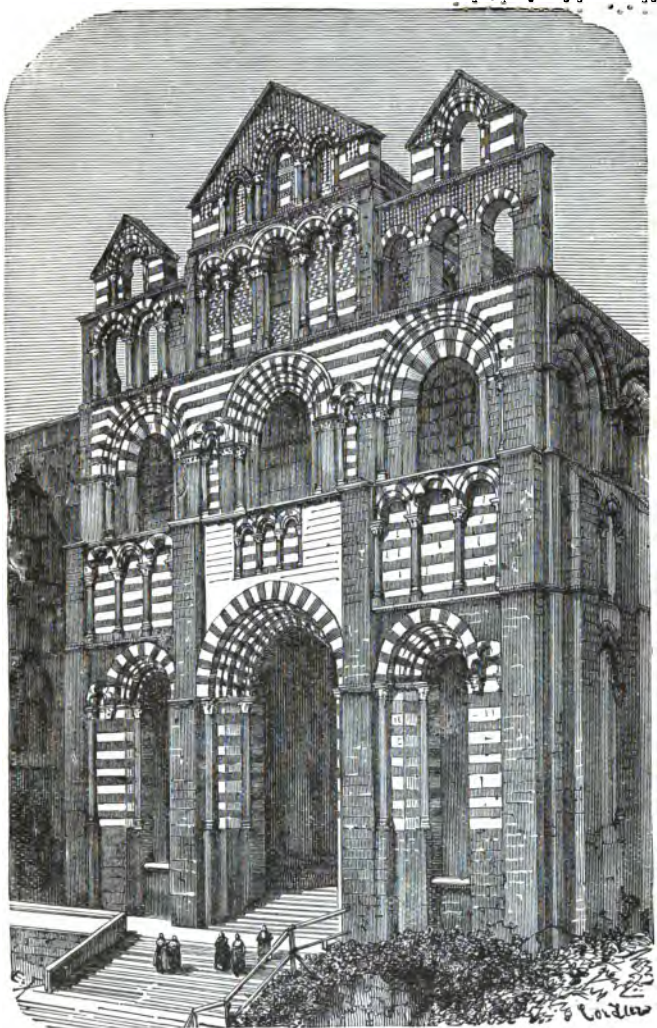
The great nave rests upon magnificent pillars garnished with four columns and with thick groined vaults, which are sunk by time and the weight of the upper mass. The capitals are robust, and are formed of leaves and grotesque animals. Upon the whole interior wall the engaged pillars round the aisles correspond with those of the nave; but their

capitals appear to have been recarved in the fourteenth century.

There is a beautiful church at Saintes of a rather later date, decorated in a style which has been called the Ornate Romanesque. Its interior, 320 feet long, now serves as a stable. It has still preserved intact, however, a very primitive apse, a very rich façade, and a charming lantern, the two storeys of which are pierced with twelve double arcades rising above a conical stone roof.

Nature has done much for the Cathedral of Puy, its situation adding much to its beauty. It displays three naves upon a narrow space, and its façade over-runs it on either side. Space having failed the builder, the portal is placed on the slope of the hill. The south transept is decorated with a projecting porch, ornamented with round arches within a pointed arch. Besides a tower with rich arcades which crowns the choir, we notice an isolated tower, the base of which seems to have served as the baptistry. On the north extends a cloister formed by four porticoes, with capitals imitated from the ancient Corinthian. Passing to the interior, we are struck by the square form of the apse without its aisles, and by the eight cupolas that surmount the nave. Commenced probably in the fifth century, reconstructed in the ninth, finished between the eleventh and thirteenth centuries, the cathedral has nevertheless an harmonious aspect. All the modifications to which it has been subjected belong to the two intimately associated styles of architecture—the Romanesque and the Byzantine.

St. Sernin, of Toulouse, has been less fortunate. Additions of the fourteenth and fifteenth centuries, and still more an unskilful restoration, have altered the perspective of the great nave, and ruined the interior decorations. But the



Cathedral of Puy.

UNIV. OF
CALIFORNIA

nobleness of its five naves, divided by four ranges of pillars, and especially the marvellous beauty of its apse, serve to sustain its ancient renown. These parts of the structure, in which ornaments of sculptured stone are set off by the rich deep tint of the bricks forming the base of the walls, seem to serve as a basis for a high brick tower, pierced with bays either round or slightly narrowed like mitres. The result of the whole is a pyramidal arrangement of a surprising effect, at once majestic and light, elegant and strong. St. Sernin was consecrated in 1096, to which date we must assign the whole apse. As to the tower, it was not constructed till the fourteenth century, but with the evident intention of harmonising with the general style of the structure—a proof of taste the like of which it is difficult to find in our own day.

In the south and south-west of France, about the twelfth century, the Romanesque architecture, at first so severe and simple, began to admit great profusion of ornaments and sculptures, often barbarian but always ingeniously grouped. This gave rise to the more ornate Romanesque style which prevailed south of the Loire to the middle of the thirteenth century.

This style has been employed in all sorts of edifices, one of the most beautiful specimens which remain having been discovered in the Prefect's Court at Angers. Here are to be seen great bays, with plain round arches sculptured, and apparently belonging to the galleries of a monastery.

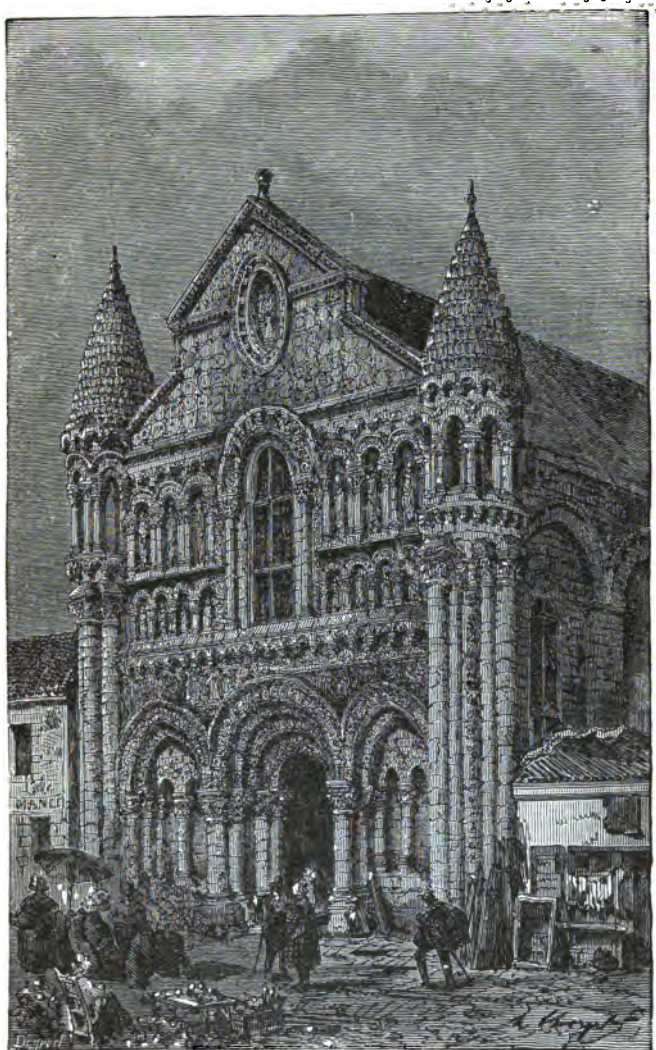
The ornate Romanesque is admirably suited for the decoration of façades. That of Notre Dame de Poitiers, for example, is an immense bas-relief which commences at the pavement and ends at the summit of the frontage. Two charming round towers in stone flank the conical roofs, on

the pediment of which Christ is sculptured within an aureole. Over the choir rises a beautiful lantern of many storeys. The interior is more ancient than the façade, and is in a correctly simple style.

Mérimée considers the church of St. Gilles (1150-1220) as the *ne plus ultra* of ornate Romanesque. Conceived on a gigantic plan, abandoned before being finished, mutilated at the end of the last century, it still preserves a vast and beautifully lighted crypt, a famous staircase, and an admirable portal, covered with bassi-rilievi statues and friezes, upon which are depicted a flora and fauna unknown elsewhere. From the débris of this façade one could decorate a dozen sumptuous edifices. So rich indeed is it, that at first sight the spectator is confused. His attention is called to every side at once, and not knowing where to rest his glances, he loses the general effect altogether. This is the inconvenience of all ornate styles, of which St. Gilles unites all the main features:—"Width of base, appearance of solidity which merges into heaviness, excessive subdivision of parts, profusion of details, having evidently for their object the lightening of the general heavy effect."

Among ornate façades we may also mention that of St. Trophime of Arles. Here we already find that the Gothic style, born as it were in the Isle of France, has begun to combine with the Romanesque, which it was destined to supplant. St. Trophime bears evident marks of this concord, or rather of this struggle. As we advance from the nave to the choir and the apse, the Gothic takes the lead and triumphs, and if it respects the square tower, it yet invades the cloister and decorates one-half of it.

This cloister is one of the most beautiful that can be anywhere seen. Romanesque or Gothic, its arcades are



Notre Dame de Poitiers.

UNIV. OF
CALIFORNIA

supported by double colonnades in marble, narrow, round, and octagonal, alternating with pillars ornamented with

Western Door of the Cathedral of Mans.

Greek statues cut from the same block of stone. The Romanesque part is executed in much the better style, and

is the more interesting on account of the costumes shown by the statues and bassi-rilievi.

Many beautiful churches in the middle of France date from the time when the rising Gothic grafted itself upon the declining Romanesque. This period of transition is perhaps best illustrated by the beautiful cathedral of Mans.

Upon an eminence fortified by Roman works, at the foot of which roll the gentle waters of the Sarthe, at one of the extremities of the old town, in a deserted and apparently antique locality, are the remains of this cathedral. The history of the building is obscure, but it is probable that the Romanesque church, many times burnt down, was restored in Gothic at the commencement of the seventeenth century. The round arches of the arcade were supplanted by pointed arches to correspond with the new choir, which is wholly the purest and noblest style of Gothic. Above the great arches, supported by pillars alternately round and prismatic, runs a narrow gallery of arcades with round arches. Eleven chapels disposed in a semi-circle surround the choir, separated by a double rank of columns.

The nave measures 188 feet long by 78 feet broad, and the length of the transepts is 192 feet. The choir and aisles are 143 feet long by 104 feet broad. From the portal to the last chapel the length of the building is 490 feet, being 40 feet larger than the cathedral at Amiens, and 6½ more than that of Rheims.

CHAPTER XI.

GOTHIC ART.

In the twelfth century one of the Romanesque schools of architecture sprang into popularity, and introduced an innovation which became the principle of a new style of art. A mere artifice, namely, the application of exterior buttresses to narrow and high walls, enabled builders to carry their arches to great heights, and to multiply their windows. Hence the Gothic style, which is essentially nothing else than the Romanesque elevated, and with the addition of external supports. The buttress—a sort of permanent scaffolding—a superfluity, the imperfection of which the subtlest art can hardly disguise, is the most prominent feature of Gothic. A secondary feature is the employment of the pointed arch which, previously known to Roman architects, supplanted the round arch. This, like the buttress, is co-relative and necessary to the increased elevation of the structure. Finally, all the modifications which the Gothic style introduced have for their generating principle that mystic love which aspires to heaven, and finds its symbol in the singular loftiness of pillars and vaults.

It was long supposed that the Gothic took from the East the form of its pointed bays, and the lightness of its ornamentation.

Without denying that there are certain resemblances in this respect, there can at the same time be no doubt that

we must look to the West, and among ourselves, for the origin and parentage of Gothic. Gothic may be described as an entirely French architecture, the honour of originating which is divided between Rheims, Amiens, and Paris. In the basin of the Oise, as early as the eleventh century, churches were to be found whose distinguishing characteristic was Gothic. Half-a-century sufficed to make all the Romanesque schools disappear, and in the thirteenth century the Gothic penetrated even to Germany and Italy.

The cathedral of Laon (1114—1154) appears to be the most ancient of the Gothic churches. Next, in order of time, comes Noyon, the ancient church of St. Denis (1130—1134); and the interior portion of Notre Dame at Paris (1163), which preceded by a few years the churches at Bayeux, Sens, and Langres. The cathedral of Paris is too well known for us to dwell upon the branches of its solid portal, the bold projection of its horizontal lines, its sober and majestic galleries, and its sombre buttresses which support the towers, and seem directly to rest on the soil itself.

The cathedral at Amiens belongs to the succeeding period (1220). Its façade and spire, rising respectively to the height of 165 and 440 feet, would, without doubt, have exceeded those dimensions if the original plan had not been modified after the death of the architect, its designer. Its larger vaults rise nearly 140 feet, and cover an expanse of 45 feet, an achievement that is all the more astonishing, considering that the exterior walls do not exist, so to speak, but are replaced by piers or buttresses, between which are chapels. "Take," says M. Reynaud, "the columns of the central nave at Amiens, and it will be found that their elevation is equal to sixty-six times their diameter. On the

other hand, the supports of the baths of Caracalla, and of the Temple of Peace, are only ten times that of their diameter; and at St. Etienne of Caen, the loftiest of the Romanesque churches, the pillars are only thirty-three times the height of their diameter. The height of the nave of Amiens is three times that of its width."

The entire central length (nave and choir) is considered not only the most beautiful part of the church, but a masterpiece of art. It comprises altogether five naves sustained by elegant circular pillars, furnished with engaged columns. Two lines of similar supports divide the transepts into three naves. The *coup d'œil* is magical, and the *ensemble* marvellous, lightness and strength being blended into perfect harmony. But however admirable the cathedral at Amiens is for unity of conception, it is not equal in originality to the church of Chartres. Six centuries, counting from the twelfth century, have been devoted to the completion and ornamentation of this structure. By rare good fortune the building betrays no offensive disparities in style or tone, and yet retains all the graces of variety. Its narrow and high façade is surmounted by two unequal spires—one sober and majestic, the other of astonishing freshness and considerable height. The latter belongs to the sixteenth century, and all florid as it is, it pleases less than the first, of which the bare spire rises in a single unbroken line towards heaven. Its two lateral porches are as ornate as the portal is simple. The most beautiful is that on the north. Raised on a basement of seven steps, it presents three grand arcades surmounted by gables, and containing piers and columns ornamented with a number of statues and bassi-rilievi. As to the vaults, they also are richly furnished with ornaments. The sides

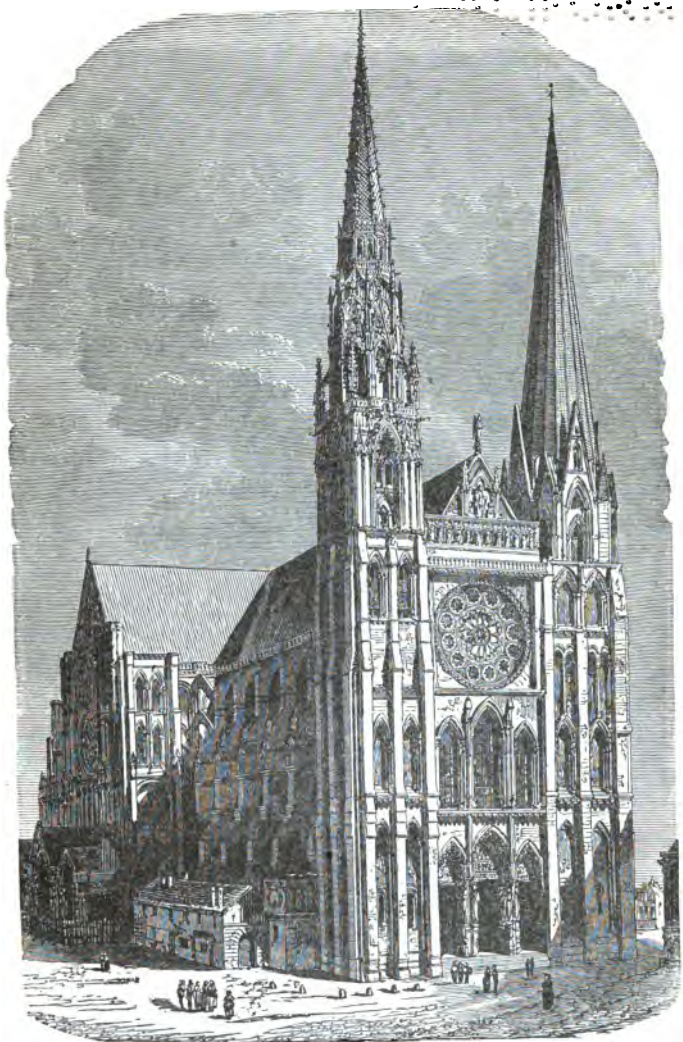
are covered with arcades. Above the porch, in retreat, rises the upper part of the portal, flanked by two small octagonal turrets, and surrounded by a triangular gable ornamented with a figure of the Virgin, and of which the base is supported upon a fine gallery.

There is not in France a church so rich in sculptures. Calculating only the exterior, there are to be counted 1,800 figures without including arabesques, gargoiles, corbels, masks, and consols. These stone figures narrate, as in an allegorical poem, the history of this world and the next. Add to the statues the thousand figures that shine in the coloured glass, and the beautiful groups which adorn the palings of the choir, and we can comprehend why the cathedral of Chartres appeals more to the mind than its rivals, and why it seems animated with a mysterious life.

The most ancient part of the building is the crypt, where are some columns in the antique style. The façade dates from the latter part of the twelfth century, but the choir was added in 1260. This great building has a total length of 340 feet, and its other dimensions are :—length of transept, 204 feet; height of vaults, 110 feet; total width, 110 feet; width of the façade, 102 feet; height of the old tower, 366 feet; and of the ornamented one, 396 feet.

Situated upon the highest part of the town, St. Etienne of Bourges towers afar over the vast plain of Berry. Its immense front, 162 feet wide, is pierced by five portals enriched by a multitude of excellent figures. Two towers which crown it are of later date than the body of the church, and are of unequal height and mediocre beauty. Upon the northern one the sixteenth century has lavished ornaments, mouldings, bell-turrets, and pinnacles; but the eye loses itself amidst this confused decoration, and cannot

UNIV. OF CALIFORNIA



Cathedral of Chartres.

UNIV. OF
CALIFORNIA

seize the solid lines, which are the chief characteristic of such important structures. Nevertheless, the renown of the edifice is fully justified by its portals, its fine majestic naves supported upon sixty pillars, its ancient coloured glass in beautiful preservation, its lateral gates, and its lines of short columns, which sustain the semi-circular crypt.

With the exception of the lateral porches, no part of it is particularly attached to the Gothic style. We find primitive traces of the Gothic style in the crypt and choir; more ornate traces of it in the nave, and still more of it in the portal; but on the northern tower we find it on the decline.

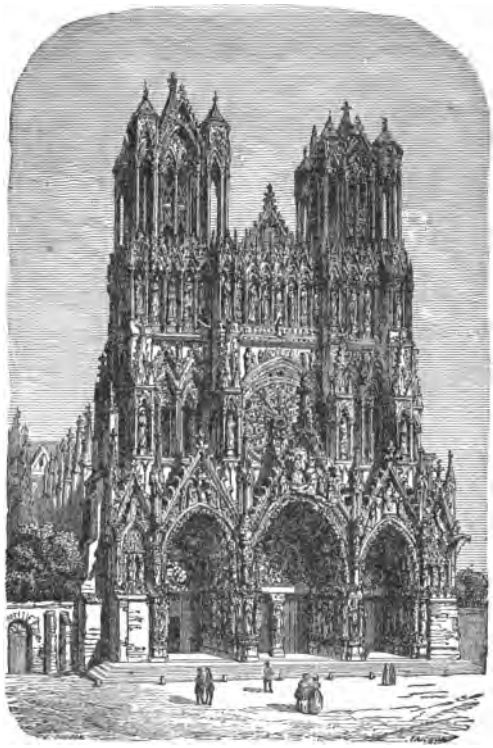
Nothing remains to us of the various edifices raised, in the fifth and ninth centuries, upon the site of the cathedral of Rheims. Of the cathedral itself, Flodoard the historian tells us that the structure raised by Charlemagne was one of the most sumptuous in France. Completely destroyed by fire in 1210, it was rebuilt from the designs of the famous architect Robert de Coucy, and in the short space of three years the former building was replaced by another 500 feet long, 101 feet wide, and 120 feet high—a building which was one of the most remarkable in France for its unity of aspect and harmony of proportion. It is formed upon the plan of the Latin cross, and owing to the transept being very near the apse, the choir projects over three bays of the nave. This was done by the architect to enlarge the perspective and vary the uniformity of the walls. In order to increase the impression of the length of the building, he suppressed everything that might arrest the eye upon the walls. He wished the spectator to embrace at a single *coup d'œil* the ranges of columns, the vault, and the apse, which, when looked at, seemed to

recede away into distance. A great number of windows, and four rose-windows, which for the most part still

Cathedral of Bourges.

retain the glass of the thirteenth century, threw upon this long avenue all the colours of the prism, beautifully

deepening into a purple light which resembles that of the setting sun.



The Cathedral of Rheims.

Four columns bear upon their capitals ornamented with pour curved volutes, a group of colonettes, which sustain the nerves of the vault. These elegant groups, cut vertically,

are the simple and noble horizontal lines of this great edifice.

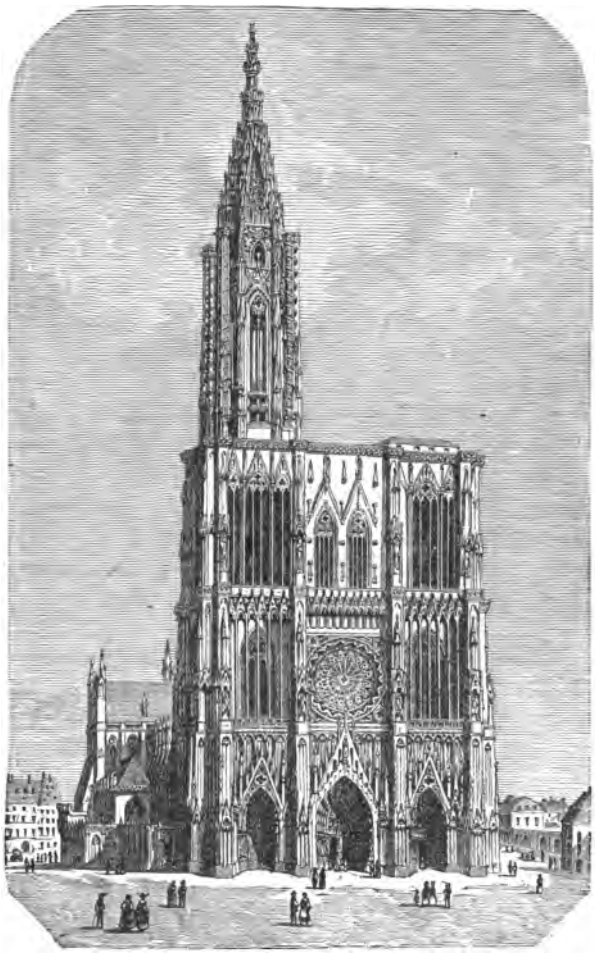
Like the preceding church, the height of the façade of the cathedral of Rheims is much greater than its width, and its horizontal divisions disappear under the ornaments with which it is surcharged. Its towers rise to more than 270 feet, and were intended to carry spires.

The three portals surmounted by narrow gates are high and deep, while the capitals support great caryatides. Above the great portal, between the edicules and the double bays, spreads out above a rich arcade a magnificent rose-window unhappily obstructed in its lower part by the flowered point of the porch.

Statues of kings shelter themselves under the pinnacles of a long gallery, which rises above the roof of the great nave. All this superposition of pointed angles, which may be said to have inaugurated the exaggerations of the perpendicular style, imparts to the façade of Rheims an aërial lightness, a mystical elegance, a sort of extreme beauty, which we could not attempt to increase without danger.

The cathedral of Strasbourg, on the other hand, does not present this unity of aspect; but like those of Chartres, Paris, and Bruges, it partakes of those different charms which are the peculiar privilege of edifices that have been slowly built, and in which are to be found the architectural traces of many ages. The austere nakedness of its crypt, and the massive circle of columns that enclose its choir, contrast with the ingeniously carved pillars of the nave, and with a choir of the fifteenth century, and a baptistry which is like a piece of goldsmith's work executed in stone. That portion of the building which is near the façade much surpasses in height

UNIV. OF
CALIFORNIA



The Cathedral of Strasbourg.

UNIV. OF
CALIFORNIA

the rest of the church, and forms a superb vestibule into which the great western rose-window throws all its fires and rich colours.

The first stone of the portal was laid in 1277, the construction of the edifice being undertaken by Erwin, a celebrated architect born at Steinbach. His son John, and his daughter Sabina, who carved many statues at the southern portal, should also be remembered. Their names, as well as that of John Hultz, who finished the spire in 1439, are among the number of those whom time respects.

The façade is in complete disproportion to the church. Taken in itself, it is a work of genius. As high as the towers of Notre Dame, it presents three divisions in height and three in width. Above the three gates with deep carvings is the rose, as in an enormous niche. The third storey is illuminated by two beautiful windows. Equestrian statues of Clovis, Dagobert, Rudolph of Hapsburg, and Louis XIV., and depictions of scenes of revelry, and multitudes of persons in various attitudes, cover the buttresses, the frieze, and the archivolts.

It is from the platform terminating the third stage on the left that there rises the famous tower which bears the spire—a unique tower, a marvel of lightness and boldness, open to the light throughout its whole length, flanked with four turrets also in open work, and through which spiral stairs ascend to the top.

The spire forms an octagonal pyramid, which looks as though it were composed of fragile lace-work. It bears a lantern surmounted by a crown, and a flower bearing a cross. In these giddy heights Goëthe once remained for a quarter of an hour under the crown itself, upon a

platform three feet square, without even the support of a hand-rail.

The building of this tower carried the fame of the masons of Strasbourg into all lands. It is said that the Duke of Milan, in 1481, asked the magistrates of Strasbourg for a man capable of superintending the construction of the cupola of Milan. Vienna, Cologne, and Fribourg, among others, were built by the Strasbourg masons. But none of these surpassed their model in height or boldness. The spire of Strasbourg remains the highest of all known edifices, with the exception of the pyramids of Egypt, which are 9 feet higher. It reaches a height of 461 feet; and after it in their order of height, but from 30 to 60 feet less in height, come the spires of Amiens, Fribourg, Vienna, and Chartres.

Space would fail us were we to attempt to describe all the beautiful churches which the Gothic style in its birth and prodigal youth has bequeathed to us. Notre Dame at Paris (a complete edifice), the cathedrals of Laon, Noyon, and Soissons, have only been incidently cited as examples. The astonishing cupola and spires of Coutances, the giant choirs of Beauvais and Cologne, might also have been mentioned as inimitable specimens of this class of religious edifices. But we have confined ourselves to some of the most celebrated specimens, well knowing that to repeat necessarily curtailed descriptions would become monotonous to the reader. What we have striven to do has been to give at least some faint idea of the construction and decoration adopted by the great unknown architects of the thirteenth century. It now only remains to us to glance at the works of the two succeeding centuries, in the architecture of which frivolity and exaggeration strove their best to destroy nobility and grandeur.

2. THE FLORID STYLE—RENAISSANCE GOTHIC.

From 1250 to 1380 there prevailed a charming and striking style, which has been called the flamboyant or florid. More walls having openings supported by narrow arches, more capitals with wreaths of foliage, imitated direct from nature, more columns and high pillars ornamented with mouldings, were introduced, and yet no evil element marred the elegance of the style. Slender and delicate, without being emasculate, the florid style did not disfigure the thirteenth century churches which it enriched and adorned. Traces of this style are everywhere to be found in the lateral naves, the apses, and the exterior bays; for it is rare not to find the three epochs of the Gothic represented in a religious edifice of any importance—the first by the general mass and the nave; the second by the vaults and the ornaments; and the third by the stalls, the jubes, and the bell-towers. Among the most beautiful specimens of this style are the aisles of the choir of Notre Dame at Paris, the façade of Bayeux, the cathedral of Metz, and St. Ouen of Rouen.

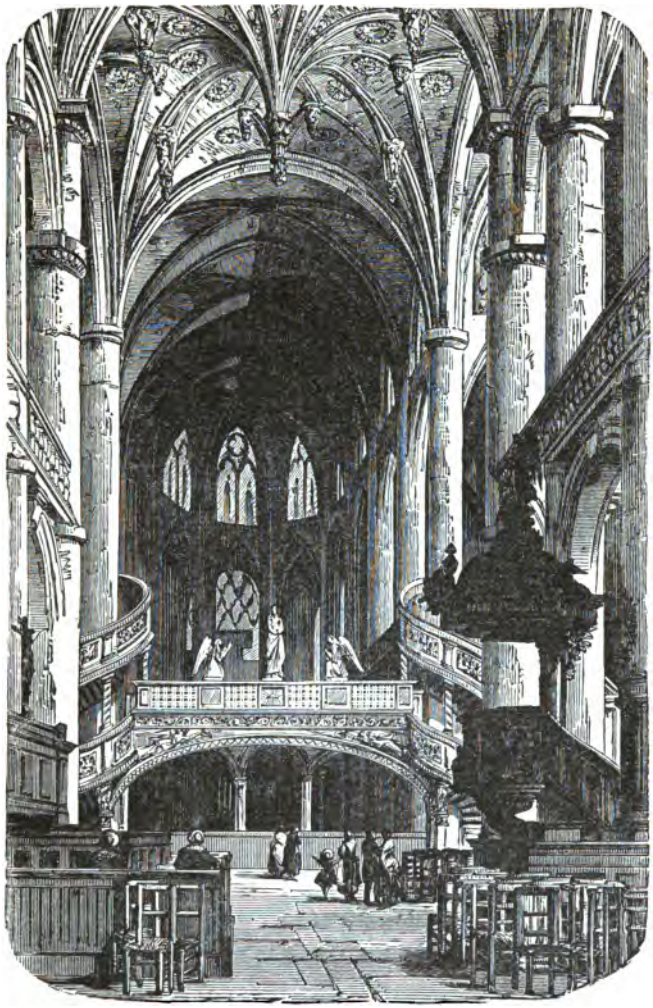
Although the nave of St. Ouen was not completed till the sixteenth century, and although its portal, built in our own times, does not realise in all its beauty the plans of the Gothic architect, still it presents all the features of the fourteenth. The whole of the eastern part of the choir and transept was finished in twenty-one years, the period extending from 1318 to 1339. In these may be admired great purity of lines and elevation, the effect of which is enhanced by the lightness of the supports. The great nave, of a considerable length and of great simplicity, makes the perspective of the choir recede indefinitely. There are

higher vaults than are to be found in this church, but few more beautiful.

In order to enjoy the exterior beauties of St. Ouen, the visitor must walk round the right flank of its walls, profusely pierced with windows, and terminated by the symmetrical forest of lesser arches which support the parent vault; stand in contemplation before the portal of the transept, which is equal to the side doors of Notre Dame; and from the bottom of a small garden which surrounds the apses, enjoy the harmonious aspect of twelve chapels with pyramidical roofs, joined to the majestic apsè, which serves as a pedestal for the great central tower. This tower is octagonal in shape, upon a square base, flanked by four charming detached turrets, terminated by an open crown. It is 266 feet high, but measurements in this instance lose their value, as everything lies in the excellent proportions which invest the tower of St. Ouen with something of the ideal and absolutely beautiful. The visitor mounts it by means of narrow stairs through obscure passages, and when he gains the summit he can behold the noble lines of the roof.

If the justly-renowned beauties of what we have been describing somewhat throw into the shade the merits of St. Etienne de Metz, it is because they are not brought out in proper relief by unity of composition. The Louis XV. façade, the florid chapels, choir, and nave, are portions of the building not sufficiently harmoniously united; but many of its beauties are worthy of the first rank. Its nave is equal in height to that of Amiens, and its glass panes present quite a fairy aspect. There are three rows of windows: the first in the collateral spaces, and relatively low; and the two others in the nave, separated by a species of

UNIV. OF
CALIFORNIA



Interior of St. Etienne de Metz at Paris.

frieze. The higher bays are the largest, the intermediate ones being grouped four and four in each triforium. Nor must the large openings which lighten the transept, and the great rose over the portal, be forgotten. The choir, which is raised upon steps, belongs to the decadent Gothic period.

After the florid Gothic comes the flamboyant, which under the pretext of slenderness and grace, strips the forms and proportions of some of the chief parts of this species of architecture of its ornaments. It dispenses with the horizontal lines, which form the windows of the great nave into two storeys, fills up the bays of the irregular compartments, softens down the angles of the pillars, or sharpens the beveling of the mouldings, gives even to the most massive supports only a fleeting form in which the shadows cannot fix themselves, and changes the flowers of the pinnacles into capricious volutes. It reserves all its riches for the accessory and the exterior decorations—the stalls, the pulpits, the crowns of the arches, the crowning friezes, the pinnacles of the piers, the jubes, and the bell-towers. Visible general decadence corresponds with great progress in details.

Among the churches, not very numerous, which have been completely built in the flamboyant style, may be mentioned St. Wulfrand d'Abbéville, Notre Dame de Cléry sur Loire, St. Ricquier de Corbie, and the cathedrals of Nantes and of Orleans. The convex façade of St. Maclou at Rouen is, however, perhaps the most beautiful specimen of this style.

Even with this order the Gothic career does not terminate, and in France at least it is prolonged by the Renaissance, which seems to impart a new life into this moribund style. Without doubt the Renaissance is a return towards the antique, but it is also a return towards purely civil life.

If it changes the plan of palaces and houses, it preserves that of the churches. It grafts its pilasters, its columns, and its Greek frontals upon the pointed vaults, bent arches, and pendent crowns. This period of transition must not be disdained, and although the style may be disapproved, it must not be altogether condemned.

Is not, for instance, the church of St. Etienne du Mont at Paris a structure full of fantasy and beauty? or can there be found many churches comparable to St. Eustache at Paris, built in the sixteenth century?

The apse of St. Eustache still preserves the pointed arch, while the Corinthian colonettes, combined with prism-shaped pillars, have neither bases nor capitals. Among the souvenirs of the flamboyant Gothic we notice the bold pendant—a vast crown supported by two angels above the sanctuary.

---

3. MILITARY AND CIVIL STRUCTURES OF THE MIDDLE AGES.

Churches and fortresses are the two signs of the Middle Ages—two forces often found in rivalry, but oftener in alliance; the one the consolation of souls alternately violent and despairing, the other the guardian of industrious cities or the defence of idle and rapacious barons. Military architecture, as may be supposed, will not by any means offer us the same variety and interest as the religious edifices; but even these unadorned masses have their beauty. Their ancient defences of towers—round, square, and pointed—their battlements and macchicolations, at the present day in ruins, show their outlines well against the sky, and represent upon the hills which they overlook that mural crown which the ancient sculptors gave to Cybele.

Walls of Carcassonne

Above Carcassonne, for example, on a sterile hill, under an ardent sun that gilds the stones, is to be seen a double enclosure of walls flanked with towers. A strong castle and beautiful church occupy the highest point of the site. We can follow the circular way between the double enclosure, and mount to the summit by a tortuous path. It is on the north, and in the interior enclosure, that are to be seen the oldest fortifications, attributed for a long time to the Romans, but which were raised by the Visigoths, of whom Carcassonne was the last refuge. The visitor admires the fine solid towers of these ruins, built of alternate layers of brick and rubble, for they have a Roman attraction quite distinct from antique architecture. We have hardly any record respecting Carcassonne beyond the twelfth century. The twin windows of the citadel indicate that epoch. Destroyed by assault, and ruined, in 1209 and 1240, the Visigothic enclosure part was rebuilt by St. Louis and Philippe the Hardy, and surrounded by a second line of defences, which, like the inner one, is a model of construction. We may mention specially a round tower called the Bishop, and also some other towers which form detached forts on the side where the fortress was most accessible.

This formidable body of defences, the most complete that has been left to us from the Middle Ages, will not, it is gratifying to think, perish like so many other interesting remains. Since 1855 the Committee of Historic Monuments have undertaken its restoration.

Another interesting stronghold, still well preserved, is that of Aigues-Mortes, which is in the form of a rectangle. Certain towers, semi-circular on the outside and square within, so as to make the interior projection as little as possible, rise above the parapet. The chief gates opened between

two towers, the interval between these being occupied by a blind-covered chamber to protect those who worked the portcullises. Between the two portcullises there was a space or trough in the vault through which projectiles could be poured upon the enemy, who could, as it were, be enclosed in a species of cage. This structure bears the character of the era of the thirteenth century, and is also a work of Philippe the Hardy.

The inhabitants of the French capital, however, have no need to travel more than a short distance in order to get an idea of the fortifications of the Middle Ages. Provins, about three hours' journey from Paris, furnishes a good-enough example of such ruins. The walls of the higher part of this fortress were raised for the defence of an abrupt promontory, narrow but long, which runs from the plateaus of La Brie into an oval valley, where modest streams unite to pour their waters into the Seine. Upon the north flank of the hill the ruins rise up solidly in a picturesque region, and seem to menace with their towers all who repose within their shadow. They run from the north to the south-west, then tending to the south they descend towards what formed the lower town of the enclosure. They are strongest at the weakest points of the position. Instead of opposing to assailants a single front in a straight line, they present at the narrow part of the plain the point of a formidable angle, armed with a strong cylindrical tower. A fosse, more than 100 feet long by 32 deep, protected by a glacis, guards the foot of the walls. The high part of the enclosure, like all skilfully devised feudal castles, was defended and cut off from the lower part by a suite of walls and forts erected upon the escarpments. Nor was this all. The palace of the counts, together with the

church and its cloister were separated from the rest of the citadel and occupied the point of the promontory. Again, a very strong tower connected with the walls, and serving the double purpose of a prison and a means of defence, rose at some 325 feet distance from the palace. This tower is raised upon a square sub-basement, is octagonal in shape, and is flanked by four little turrets. It has for a long time been known as the Tower of Cæsar; but although we cannot easily determine its date, it is not improbable that it was anterior to the twelfth century.

As far, however, as a pure donjon is concerned there is scarcely anything comparable to Coucy, in which fortress everything is on a colossal scale. The steps of the stairs, the embrasures, the seats, and all the details seem to have been made for men of more than ordinary size. The circular donjon, 100 feet wide and 208 high, rises between four towers, at the angles of a quadrilateral measuring 58 feet by 113. Originally it was divided by three vaults, now sunk in, into three great parts, and crowned with a cornice ornamented with four pinnacles. On the ground-floor the hall was vaulted by means of twelve demi-arches. No less than 1,200 or 1,500 men might be accommodated in a time of need in the upper rotunda.

Built by Enguerrand III., about 1230, the castle of Coucy, one of the most imposing marvels of the feudal epoch, overlooks a rich valley between Noyon and Chauny. It has no longer to fear the depredations of the inhabitants, who used to remove its stones, as it has now become the property of the state. Since 1856, the cracks in the great donjon have been repaired, which were caused by the springing of a mine in the seventeenth century, by order of Mazarin.

It remains now for us briefly to glance at the civil Gothic buildings raised in the latter part of the Middle Ages. France possesses a certain number, among others the beautiful Palace of Justice at Rouen. But they abound especially in Belgium, a country of municipal and industrial

Ruins of Coucy.

life, where devotion to human interests is clothed with a pomp equal to that which accompanies the worship of the Divinity.

Constructed in the middle of the fifteenth century, the Hôtel de Ville of Louvain seems a Gothic shrine, raised in stone upon gigantic proportions. The sculpture, delicate and fine, resembles miniature work, and the statues are so

numerous that hours are not sufficient to count those on a single side.

The façade presents three storeys surrounded by a gallery, and a covering in which are pierced three storeys of dormer-windows. It is composed of three orders above a basement in stylobate. Ten Gothic windows, surmounted by counter-curves, are separated by elegant buttresses. Turrets ornament the three galleries resting at the angles.

The Hôtel de Ville, again, at Brussels, is considerable for its elevation and its extent. Constructed in the space of twenty-one years—namely, between 1401 and 1422—it is in the same style in all its parts, and the houses in the neighbourhood are of the same epoch. Decorations and fillets of gold ornament this hotel. Its façade, which presents a gallery of seventeen arcades supporting a species of balcony, is pierced with twenty windows upon each storey; and a balustrade forms the crown as at Louvain. As in the former instance, the roof is decorated with ranges of dormer windows. The tower of the belfry is octagonal, and entirely composed of open work. It is much admired for its elegance and boldness.

After Louvain and Brussels, Ypres, with its low façade surcharged with colonnettes, and surrounded with open-work, and Gand, the Hôtel de Ville of which combines Gothic ornaments with the proportions and classic columns of the Renaissance, may equally be admitted to the third rank of buildings of the kind we have described.

CHAPTER XII

ITALIAN RENAISSANCE.

BARBARISM had but a short reign in Italy, and a Renaissance followed close upon the wretched innovations of the tenth century. This re-awakening of true art, this day-spring of hope and of artistic life which manifested itself in the first years of the eleventh century, had, as we have seen, already flourished in France; and it is to that century that the West owes the beauties of Romanesque art. More rapid still, and more fruitful, was this revival among the Italians, a people who had only to excavate their ruins in order to procure models of antiquity—a revival which was accelerated in consequence of the rivalry between Pisa, Florence, Sienna, Genoa, and Venice; and which resulted in the production of architectural wonders in which Byzantine taste and Latin traditions formed a combination, at once full of power and grace. As supports to the cupolas, to the walls of the rotundas, and to the naves, the Italian architects introduced forests of colonnettes, and ranges of small arches which delighted the eye and gave grandeur to the edifice.

Pisa contains the model of the style which we may call the Italian Romanesque. Upon a large open space stand four famous structures—namely the Cathedral, the Baptistry, the Leaning Tower, and the simple and noble Cloister of Campo Santo. These beautiful buildings form a magnificent spectacle, rendered somewhat sad, it is true by the thought

of the deep decline of Pisa, but a spectacle which assumes a magic power over the spectator, who is transported by thoughts of the time when Pisa, victorious over the Saracens, enriched herself with a multitude of capitals, bases, and antique columns, and raised the Cathedral at once to celebrate her triumphs and to make use of her spoils. It was in 1083 that the Byzantine architect Buschetto was commanded to construct the Cathedral, in which the ceilings, the vaults, the architraves, the arcades, the cupola, and the Latin cross combined to express an original idea, and create a new architectural form. This noble structure suggests the antique without its bareness, the Byzantine without its heaviness, and the Romanesque with all the life and fervour which it displayed in the West.

Five storeys of arcades cover the façade of the Cathedral with their superposed porticoes. "All the antique forms are again reproduced, but treated differently. The exterior columns of the Greek temples are reduced, multiplied, elevated in the air, and placed in the category of ornaments." The natural weight of the dome is lightened by a crown of five colonnettes. From the two sides of the great gate, guarded by two Corinthian columns, enveloped with a prodigality of foliage, calices and acanthus, the visitor beholds the church in all its magnificence, with its files of columns, its fine naves, and its multitude of graceful and brilliant forms. A second avenue—the transept, also richly furnished—crosses the nave, and above this Corinthian forest smaller files of columns prolong themselves and support a quadruple gallery. A figure of the Redeemer in mosaic, with the Virgin, and a figure of one of the minor saints occupy the base of the apse, all of which are the work of Jacopo Turrita, the restorer of mosaic art. The

whole of the decorations of the walls, outside and in, consist of mosaic work in black and white marble.

The Baptistry is a simple pear-shaped isolated dome placed upon walls, furnished also with colonnettes, and sustained by Corinthian arcades, with capitals and antique bassi-rilievi. Under the cupola is a rich basin with eight sides; and on the left a marble throne decorated with grand and simple figures, the work of Nicolas of Pisa, a sculptor of the thirteenth century.

Next in order of the marvels of Pisa comes the Leaning Tower, which looks like a strong round pillar, 88 feet in diameter, surrounded by seven storeys of round arched arcades. It was commenced in the second half of the twelfth century. A plumb-line suspended from the summit hangs out about 12 feet from the base, showing how far the tower leans off the perpendicular. This singular inclination, which is observable also in the two towers of Bologna, is perhaps attributable to the unequal sinking of this structure. It appears that the singularity showed itself as soon as the building was above ground; but the architects determined to proceed with their work in open defiance of the laws of equilibrium. The architects proved right, for hundreds of years have passed since it was expected this tower would fall, and yet it remains standing.

In the course of the thirteenth century Gothic art penetrated into Italy, and revealed itself there all at once in the shape of two architectural masterpieces. These, however, were instances of a somewhat peculiar Gothic, such as could be comprehended only by Italy, the direct heir of Rome. This Italian Gothic displayed forms rather different from ours, and polychromic decorations such as would be quite unsuitable for a cold climate. At Assise

this style approaches ours more than at any other place in Italy.

In this instance there are three churches, the one above the other, like the various storeys of an architectural shrine. The lowest is a black crypt, like a tomb, into which we descend with torches. The second church is long, low, and sombre also; but covered with fringes, foliage, and painted figures, and remarkable for a winding staircase, and for its sheafs of slender colonnettes. Overhead, the third church rises as aërial as the others are sombre and obscure. Everything here rises into air and light. The church narrows its vaults, points its arches, and mounts, and still mounts, illuminated by the rose-windows, and the coloured glass windows which glitter with bands of gold and stories from the Inspired Book. It is said that in the three churches the architect intended to represent the three worlds. In the lowest he strove to depict the shadow of death, and the horror of the grave; in the middle, the passionate anxiety of the Christian in our world of troubles; and in the highest, the joy and glory of paradise.

Adjoining this wonderful church is a monastery, enclosing an elegant square cloister consisting of two storeys of galleries. Here in this beautiful retreat, scholastic abstractions were transformed into ideal apparitions by the contemplative monks.

The cathedral of Sienna—commenced about the same epoch, but made for a public worship and a religion less refined—deviates more from the Gothic character, and returns to the regular strong Pagan method which is seen in so many Italian edifices. Like the inferior arches of the nave, the arch of the portal is pointed; but the arcades are round-headed. The upper galleries are composed of Corinthian

architraved colonnades, while the capitals of certain pillars of the nave are composed of figures of birds.

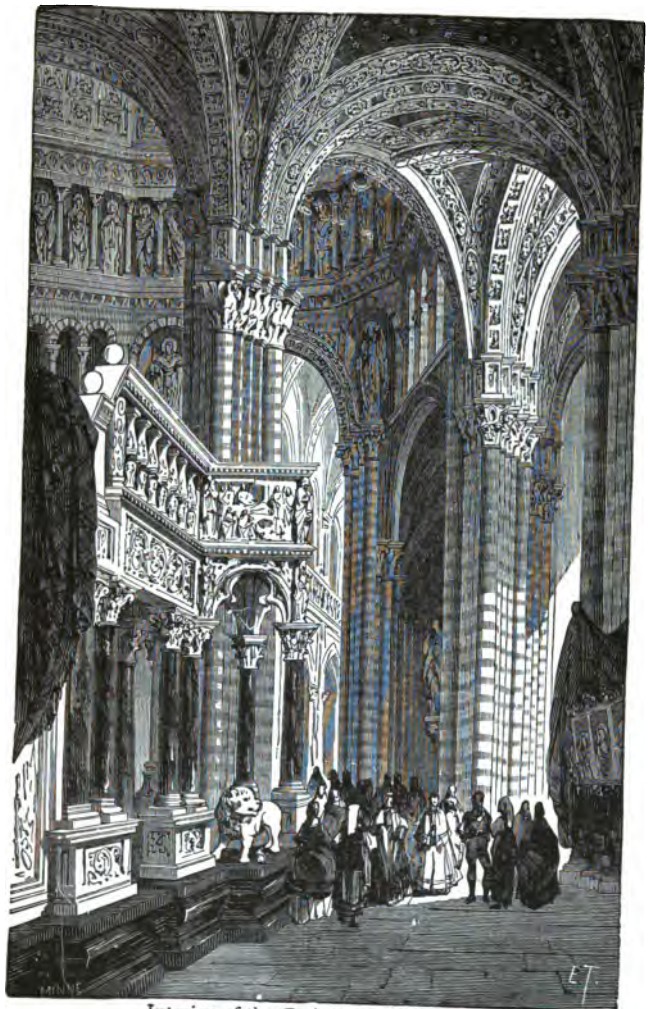
The façade, bordered with statues, rises above the three gates in three pointed pediments; above these pediments are three pointed gables; around these gables are four pointed towers; and all these points are notched with indentations. But if the architect loves the long slender forms that have come to him from beyond the sea, he loves also the solid forms which ancient traditions have left to him. He carries high in the air the aërial globe of the dome; and he clothes the shaft of his columns with naked figures, with hippogriffs, birds, acanthus and flowers, which interlace and twist at the summit. The same blending of architectural ideas is seen throughout all its details.

After the façade, the marvel of the cathedral of Sienna is the pavement, decorated with inlaid enamel-work by Becafumi. It is covered with a movable flooring, but the visitor, by giving a gratuity to some of the attendants, can have the flooring partly raised, and can inspect this artistic work. At certain annual fêtes the deal flooring is altogether removed, and the wonderful work can be seen in its entirety.

Among the other things to be admired is the celebrated pulpit of Nicolas of Pisa, on which that artist has sculptured the life of Christ, with a chisel which has none of the stiffness of the Middle Ages.

The church was built at successive periods, and it is impossible to mention the different times at which it was enlarged. Some obscurity hangs even over its origin, all that is known for certain being that it was rebuilt in the fourteenth century. A document of 1012 places the dome of the cathedral of Sienna on the site which it occupies to-day.

UNIV. OF
CALIFORNIA



Interior of the Cathedral of **Sienna**

UNIV. OF
CALIFORNIA

Its re-construction commenced only in 1322. Everything proves that the plan was then changed, and that the proportions, still vast, were considerably reduced.

Only the shadow of the Middle Ages glided over Florence, the religious sentiment in that city being almost always placed behind patriotic pride and love of beauty. The decree by which she charged the architect Arnolfo di Lapo or di Gambio to build St. Mary of the Flowers, reads like an ancient inscription, or rather the prelude of the great Latin Renaissance. "Listen!" she says: "As it is the highest prudence in a people of great origin to proceed in their affairs in such a manner that their works will bear witness to their wisdom and magnanimity, it is decreed that Arnolfo, the master architect of our city, shall make models for the repair of Santa Maria, with the greatest and most prodigal magnificence, and in such a way that the industry and wisdom of man will not invent, nor ever be able to undertake, anything that may be greater or more beautiful."

We cannot consider this announcement ridiculous when we behold the work to which it refers. The nave measures 448 feet, the transept 325 feet, and the vault 150 feet in height. The cupola is 136 feet wide, and the cross which surmounts the dome rises to the height of 387 feet. The exterior commands our admiration for its ornamentation in many-coloured marbles; for the vastness of its immense octagonal dome, which rises towards heaven with as much beauty, and evinces more power than the towers of Gothic architecture; and for the minor domes that group themselves around the apse. Except the shape of the windows, there is nothing Gothic in this structure, strong walls being made to support themselves without the aid of buttresses.

But the want of a façade disappoints the traveller. Giotto had one built in the fourteenth century; but it was afterwards destroyed, and has never been replaced. Glancing at the interior, we find its aspect grandiose but very simple, though the pavement is so rich that it looks like a parterre of flowers. The arcades are sustained by pilasters, supports which cannot be compared to the Greek columns or the Romanesque or Gothic clusters; but the height of the dome and its beauty make up for every imperfection, and persuade us to overlook the pompous and tiresome frescoes of Vasari.

The history of this dome—beholding which Michael Angelo exclaimed, "It would be difficult to equal it, it is impossible to surpass it!"—deserves to be briefly given. Arnolfo di Lapo, Giotto, Orcagna—to mention only the most famous of the architects of Santa Maria—worked each in succession upon the church without advancing it so far as to prepare it for the roof. Brunelleschi offered to execute a dome which should at a considerable height sustain itself by its own weight, without the additional support of buttresses, of iron girdings, or of a central pillar, which were the artifices proposed by his collaborateurs. He was treated as a fool; but no other practical plan being offered, he was asked to execute his plan, which he did not wish to divulge. He was then a little more than thirty years of age. The construction of his dome occupied him (concurrently with other famous works) the whole of his lifetime, and when he died it was not quite finished. It was completed, however, according to his designs. Thus was raised the first dome properly so called. Up to this time cupolas were only circular roofs; after this they were structures apparently hung in space above the lower building. In later times Bramante and Michael Angelo spoke of raising the Pantheon of Agrippa upon the

vaults of the Temple of Peace. Such a feat had already been accomplished by Brunelleschi.

On the right of the cathedral rises the isolated campanile built by Giotto, a square tower, semi-Gothic, that would be severe in style but for its rich and varied colours, which form the distinguishing feature of Tuscan architecture. It is extremely simple in outline. We cannot say that it has not been surpassed; but its beautiful proportions and its height, 263 feet, are in perfect harmony with the cathedral near it. The celebrated baptistry, the gates of which Ghiberti sculptured in bronze, built upon the site and with the remains of an ancient temple, completes the decoration of the square of the cathedral. Chains of iron, a trophy won from Pisa, are here to be seen; for Florence had conquered the other city in a political as well as in an artistic sense.

While the Gothic seemed about to disappear from Central Italy about the end of the fourteenth century, it still held its ground in Lombardy, producing all its perfections in the cathedral of Milan. But this edifice, in spite of its magnificence, its vastness and renown, cannot be compared with the marvels of Gothic architecture, as these are to be seen in France. Such is the impression of most travellers. The cathedral of Milan is thus spoken of by Heine: "From some distance it looks like white paper cut into endless fantastic and ornamental shapes, and on approaching it we are astonished to find that it is composed not of paper but of veritable white marble. The innumerable statues of the saints that cover the edifice, standing in all attitudes under their little Gothic niches, form a collection of people which agitates the mind of the beholder. On closer examination we find the building beautiful throughout, a colossal architectural pet, a play-

thing for children of the giants." The interior is more austere. Its five naves are sustained by pillars flanked by columns and covered with immense capitals surmounted with colossal statues. The vaults, beautiful and bold, are 153 feet from the ground. Everything in the building, which measures 520 feet by 182 feet, is in white marble, not a fragment of wood being seen. Numerous spires crown it, the chief of which, in white marble, rises to the height of 350 feet, and supports a large statue of the Virgin. Access to the top of this is gained by means of a stair, and from the summit is obtained a fine view of the varied scenery of Lombardy. The outline of the white Alps is seen against the blue horizon on the north. On the south and west are the Apennines, while all round seems a sea of verdure dotted here and there with white spots, which are the towns and villages. Commenced in 1386, under Jean Galeas Visconti, by French and German architects, continued for four hundred years, almost finished by Napoleon, this great edifice remains to the present time incomplete.

There is a large number of admirable structures which we must leave unnoticed. Among these are the palace-fortresses of Sienna and of Florence, numerous churches, the Chartreuse of Pavia, and especially the famous ducal palace of Venice, wherein the Saracen taste blends with the Greek style, and the whole is enhanced by Gothic ornament. This first Renaissance style possesses wonderful charm and grace. But we are now about to see the architectural mind ridding itself more and more of the influence of the Middle Ages, and becoming more and more inspired with the spirit of antiquity. San Gallo, Bramante, Michael Angelo, and twenty others, covered Rome with palaces and churches, which we shall next briefly glance at.

2. RENAISSANCE OF THE SIXTEENTH CENTURY.

The greater number of the palaces with which the most famous architects of the sixteenth century have filled Rome and its neighbourhood, are not equal in originality to the works accomplished by their predecessors one or two centuries before. The palaces of Doria, Chigi, and Barberini are all magnificent structures, but their interior riches eclipse their architectural beauties. The noble Florentine mass of the palace of Venezia, built in 1464; the interior colonnade of the palace of La Chancellerie, the work of Bramante; the Court of Loges at the Vatican, arranged and decorated by Raphael; the ingenious portico of the Massini palace, and the celebrated Farnesi palace,—these are almost the whole that will leave a durable impression upon the memory.

The Massini palace, an object of admiration and study among architects, shows what talent can make out of an irregular and narrow space. Its curved façade has a Doric vestibule leading to three courts of exquisite elegance. Raised in 1532, it is considered the chief work of Baldassare Peruzzi of Sienna, who has been called the Raphael of architecture.

The Farnesi is, however, the most beautiful and superb palace in Rome. Its formation is a perfect square. Each of the four sides is paved with three ranks of crosses. By the great exterior gate we enter into a vestibule ornamented with twelve Doric columns, in granite, mounted on bases. The court is exactly square. It is decorated all round with the three orders—Doric, Ionic, Gothic—superposed. The two first support the arcades of open porticoes. Pilasters

separate the windows. A magnificent staircase conducts to the gallery on the first storey, the vault of which was painted by Annibal Carrache and his pupils. It is a splendid decoration, compared by Poussin to the works of Raphael.

Antonio de San-Gallo, the first architect who connected his name with the Farnesi palace, designed its plan for Paul III., when that pontiff was still a cardinal. He raised the principal façade as high as the second storey. In 1544 the crown of the edifice was commenced, and was executed according to Michael Angelo's improvements upon San-Gallo's designs. It is supposed that Michael Angelo was assisted by Vignoli. It is to the combination of incorrect genius and classic talent that we owe the wonderful cornice admired by architects and travellers. Vignoli, who succeeded Michael Angelo, died in 1564. Jacques de la Porte completed the back façade of the palace in 1589. It is built of brick—the entablature, the bosses, crosses, columns, and pediments being, however, wrought out of Italian stone, taken partly from the Colosseum and the theatre of Marcellus.

Beautiful churches of the modern Renaissance style are not wanting in Rome, but they inspire neither the interest of the ancient basilicas, nor have they the grandeur of our Romanesque and Gothic cathedrals. St. Maria of the Angels, St. Louis, the Jesus church, on which Michael Angelo laboured, as well as Jacques de la Porte and Vignole, are certainly remarkable for their great dimensions, the beauty of their façades, and their ornaments, which, however, are more pompous than beautiful. But it is useless to enumerate these when we have the basilica of St. Peter, surpassing them in all their greatest qualities, and even rivalling them in their defects.

UNIV. OF
CALIFORNIA

The Vatican and St. Peter's at Rome.

The ancient basilica of St. Peter was threatening to sink into ruin, when Julius II. commanded Bramante to reconstruct it. The first stone was laid with great pomp on the 18th April, 1506. In 1514 the hemicycles were finished, and the four great arches destined to support the dome (for the dome was conceived by Bramante). This architect, who died before the work was completed, was succeeded in turn by Giocondo, Julien de San-Gallo, Raphael, Peruzzi, and Antonio de San-Gallo. The year 1546 arrived, and not only was nothing finished, but considerable indecision existed as to what ought to be done. Then it was that, at the entreaties of the Pope, Michael Angelo, then an old man 72 years of age, with great reluctance consented to take the work in hand. His predecessor had always hesitated between the Latin and Greek cross. Angelo decided in favour of the latter, being rightly of opinion that the dome must be in the middle of the building. At the time of his death, which occurred in the year 1564, when he was about 90 years of age, the drum of the dome was raised. There remained thereafter to be constructed, according to his designs, the double spherical vault, the anterior branch of the cross, and the portico of the façade. The cupola was not finished till the time of Sextus V. Charles Maderne was commissioned by Paul V. to complete the nave and façade upon a new plan, more suitable to the necessities of the liturgy. He changed Michael Angelo's Greek cross into a Latin cross, by prolonging the nave, and applied those superposed porticoes which give the church the appearance of a palace. Finally Le Bernin, a man of true genius, enclosed this magnificent perspective with two rows of carved colonnades, surrounding a vast square, decorated with two monumental fountains and a lofty obelisk.

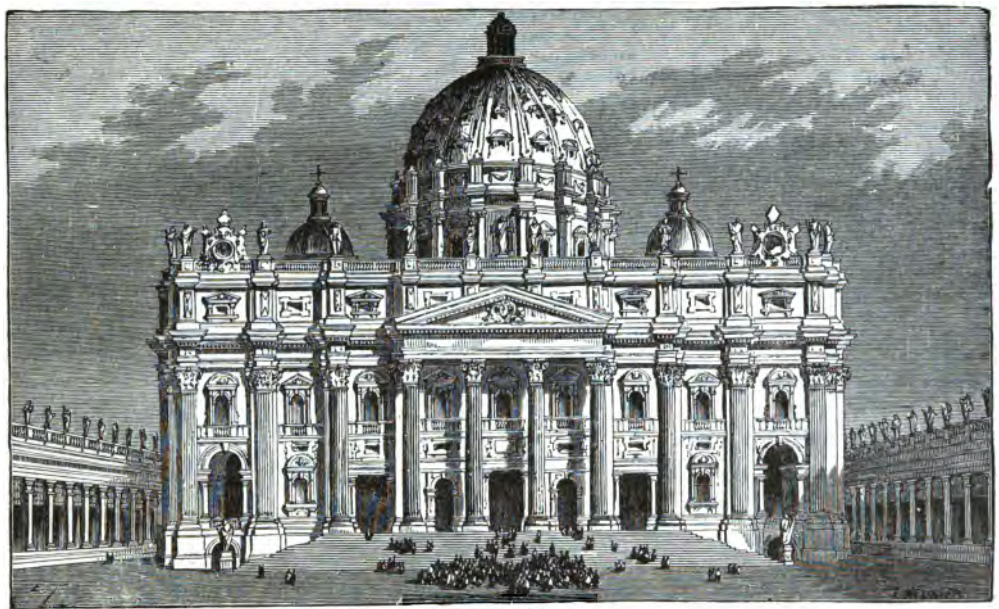
"The building of St. Peter's at Rome, with the exception of some sacristies and mosaic work executed in the eighteenth century, lasted for a century and a half. Whilst it was being erected it saw twenty popes come and go. Its works were successively directed by thirteen architects, from Bramante to Bernin; it cost a sum which, in 1693, amounted to no less than 251,450,000 francs, and the expense must have doubled from 1692 to the present day, so that the cost of the building may be set down at 500,000,000 francs."

Its dimensions are colossal; the exterior length is 712 feet; that of the transept is 500 feet; the width of the great nave is 88 feet; the vault begins to spring at 111 feet above the soil, and from this to its highest point there is a distance of 71 feet; the pillars of the nave are 30 feet high; the arcades, of which they receive the support, have an opening of 43 feet; while the dome is 137 feet in interior diameter, the pillars which support it being 70 feet in thickness.

The cathedrals of Milan, of Mans, of Rheims, the largest that exist, are dwarfed by the side of St. Peter's; and as for Notre Dame at Paris, and the cathedrals of Bourges and Chartres, they could stand very well in the transept of the great structure at Rome.

The vestibule of St. Peter's is 233 feet long. The height under the arch of the great nave is 153 feet; that of the summit of the cupola is 431 feet above the ground. The Great Pyramid of Egypt, the Spire of Strasbourg, and the Tower of Amiens, exceed this height by 42, 32, and 6½ feet respectively. Again, the surface covered by St. Peter's is said to be 74,700 square feet, exclusively of the area covered by the sacristies and the galleries in front of the building.

The decoration of the interior is of the greatest sumptu-



Front of St. Peter's.

UNIV OF
ARIZONA

ousness. The whole pavement is of coloured marble, and the vault is of stucco and mosaics on a gold ground. All round are tombs, statues, and carved works in bronze, while especially famous is the canopy of the chief altar by Bernin. The large pilasters which support the arches of the four enormous triforiums of the nave, are covered with arabesques and niches. From each arcade opens up the unexpected arcade of a chapel, which is often of the dimensions of a regular church.

Above these arches, resting upon the four enormous pillars, runs a great frieze, on which is carved the inscription: *Tu es Petrus, et super hanc petram*, &c., the letters of which are about the size of a man. Above the frieze rises a great range of composite pilasters which enclose high windows, and these are surmounted by an attic from which springs the superb dome. Finally, a gilt ball and a cross crown the lantern, pierced all round with sixteen windows, from which we look down into the area of the church as into a profound abyss.

In spite of its magnificence, St. Peter's is not perfect. Some lay its imperfections upon the abandonment of Michael Angelo's plan, while others say that that plan itself was the cause of them. The basilica is wanting in religious tone—there is nothing of mystery about it, and the small number of its divisions diminishes its apparent grandeur. Gothic or Byzantine cathedrals, it must be confessed, exhibit rarer and more striking beauties than this gigantic edifice.

It was not long before St. Peter's became a type for ecclesiastical edifices. Almost all the churches of the seventeenth and eighteenth centuries adopted the form of the Latin cross, the employment of pilasters, the groined vault, and the central dome. Most of these churches have the

faults of St. Peter's without its good qualities; they are heavy and cold, and wanting in religious character. Thus the church of Val de Grâce at Paris, dating from about 1645 or 1665, built after the designs of Mansart, Lemercier, and Gabriel Leduc, is in excellent style, and would produce as great an effect as its great model, if it were only built on the same scale as to size, and decorated with as much pro fusion and taste. The two orders—Corinthian and Composite—which form its façade, rise with an elegant simplicity. The drum of the dome, decorated and sustained by very beautiful pilasters which give it a singular lightness, takes its spring from a number of small turrets. Caryatides and vases crown the pilasters and enclose the medallions of the attic which supports the beautiful curve of the dome, divided by two ranges of dormer-windows, and by rich vertical ribs. In order to estimate the merit of this original conception, one must move a little to the north-west, upon the declivity of the hill, where the dome becomes isolated and seems to increase in size. It surpasses the Pantheon in the choice character of its proportions and ornaments. It has only one rival in Paris, and that is the dome of the Invalides.

The dome of St. Paul's in London, on the other hand, though much more important and ambitious, can scarcely be compared to it, though taken in the mass it reflects great credit on its architect Sir Christopher Wren. It has a height of 350 feet, and rises most majestically above a colonnade which surrounds its base, but which gives to it an appearance of heaviness. The same defect is to be remarked in the Pantheon at Paris. Every colonnade encircling the dome, and of a larger diameter than it, always has the effect of dwarfing it. Nothing is gained by attempts to improve upon Michael Angelo.

Interior of St. Peter's.

UNIV. OF
CALIFORNIA

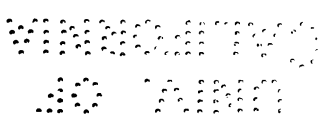
Before definitively quitting Rome and Italy to trace the development of the second Renaissance and classic art in

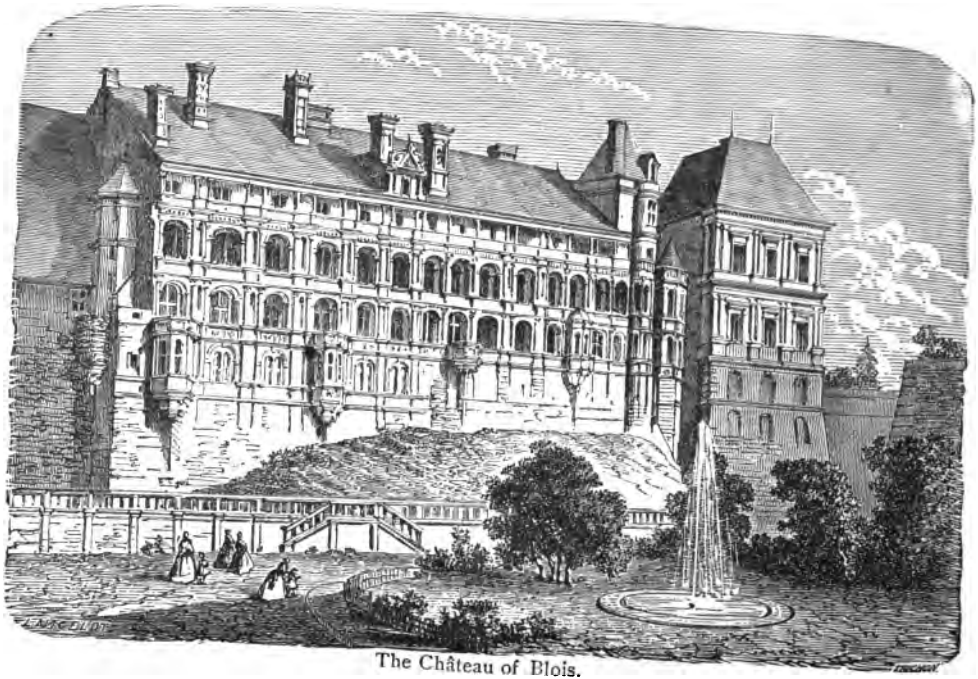
Val de Grâce.

France, we must mention two kinds of architectural decorations, which excelled the pompous school that succeeded

Raphael, San-Gallo, and Michael Angelo in naves, squares, and fountains. Nothing could be more nobly conceived than the square of St. Peter, but, on the other hand, nothing could be more ridiculous than the long square of Navone. Modern art is not to blame for this device; it was supplied by the site of the circus of Alexander Severus. Three fountains rise at the extremities and in the middle. "Figure to yourselves," says De Brosses, "at the centre of a square a block of rocks pierced and open to the daylight, with four colossal figures of river deities crouching at the corners of this block, pouring torrents of water from their urns. Here a lion, there a horse, are to be seen, that have come to drink at this fountain, while reptiles creep on the rock, which is surmounted with a temporary little obelisk in granite, which looks either like a toy or a mockery. Such is the Navone fountain."

Among monumental fountains we must mention St. Peter *in Montorio*, a triumphal arch of five bays, which crowns the Janiculine Hill, and of which the gates are decorated with pools of water presented perpendicularly; that of the Termini, built under Sextus V.; the Acqua Trevi, a vast Corinthian composition, in which groups of sailors stand upon a mass of rocks above the basin, into which runs a stream famous in antiquity, the Acqua Vergine. The fountain of Trevi has all the defects of the eighteenth century, with all its character and decorations.





The Château of Blois.

CHAPTER XIII.

FRENCH RENAISSANCE.

We have seen the Gothic, which came into existence in France, prolonging its reign during the whole of the sixteenth century, and pervading the ecclesiastical architecture. Under this influence, palaces and mansions soon began to be affected by a new power. Civil life, which gradually supplanted the influence of purely religious life, began to throw off the sombre forms of the past, and found in the bright style of the Renaissance the appropriate expression of its gladness and strong youth. Everywhere dwellings were built in a lighter and more elegant fashion. The Italian artists, doubtless, contributed to the decoration of many palaces; but a French school of architects was rapidly founded, and soon led architectural art in Europe. It is sufficient to name Pierre Lescot, Bullant, Philibert Delorme, and Ducorceau, who rendered the reigns of Francis I. and Henry IV. illustrious by their works.

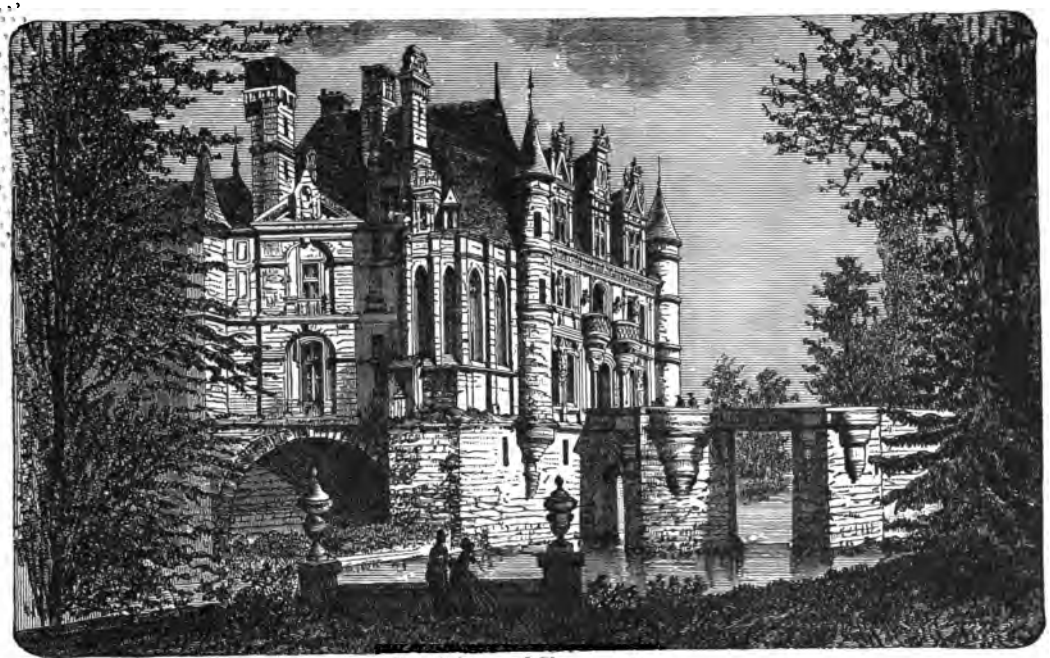
The first celebrated French château built in the sixteenth century was Gaillon. All that now remains of it may be seen at Paris, in the court of the Palace des Beaux-Arts. Its charming portal, which is called the Arch of Gaillon, shows all the characters of the French transition from the Gothic to Renaissance. It is attributed to an artist named Pierre Fain.

The château of Blois, parts of which date from the thirteenth century, passed through all the phases of this trans-

formation of architecture, and bears the marks of them. Louis XII., who was born there, was the first to dream of altering it to suit the altered times. From his reign dates the body of the building which forms the east side, where are the principal entrances. In the interior of the court the portico on the ground-floor is composed of arcades in segments of a circle, supported by columns covered with arabesque ornaments and fleurs-de-lis. The composition of this portico recalls the style of the castle of Gaillon, and deserves to be classed beside the rich decorations of Valois.

To the reign of Francis I. belongs the north-west façade, with its two beautiful galleries; its balconies, looking as if suspended from long pendants; its friezes, in which salamanders alternate with birds; its superposed pilasters, with varied capitals; and the short Ionic columns of the third storey.

In the middle of the façade, the extent of which has been diminished by the addition of Gaston d'Orléans, rises a stair open to the daylight. Each opening in the balcony is ornamented with a balustrade formed by bunches of leaves in the first storey, and of salamanders in the higher storey. Above the cornice rises an attic terminating in a terrace, the entablature of which is ornamented with all the sumptuousness which the imagination of the Renaissance architects could heap upon it. The balustrades of the terrace, and the salamanders placed at the summits of the buttresses, combine the separate styles of decoration of the balconies and the stairs. Arabesques of exquisite taste, and beautiful niches in which allegorical statuettes are placed, ornament the buttresses. The stair is decorated with carved ribs, the points of intersection supporting medallions varied in every possible way.



The Château of Chenonceaux.

UNIV OF
CALIFORNIA

As to the interior of this abode of the Valois, it is like the genius of that family—as simple and unpretentious as it is noble. Only long, low halls are to be seen, paved with varnished tiles, along which you are led by the cicerone, who recites in monotonous voice the names of the kings and princes of the house, and narrates the death of the Duke of Guise, who was assassinated in the vestibule of the closet of Henry III.

That part of the château which was the work of Francis I. was seriously damaged by the Revolution. Its restoration was owing to the exertions of Louis Philippe and the talent of M. Duban.

Next in order may be mentioned the château of Chenonceaux, which was founded in 1515 by Thomas Bohier, a chamberlain under four kings. It was acquired in 1535 by Francis I., given by Henry II. to Diana of Poictiers, embellished by Catherine de Medicis, surrounded by gardens, transmitted to several members of the royal family successively, and, finally, is at present inhabited by a rich private person. It has been spared by time and revolutions, and is one of the productions which do the greatest honour to French art. Specially admirable are the two galleries which connect the bridge of the Cher with the apartments, the kitchens placed in the towers which form the piles of this bridge, the beautiful chimney of the Hall of Catherine de Medicis, made by Jean Goujon for Diana of Poictiers, and the unrivalled ceilings, covered with figures of Charles IX. and his mother.

The château of Chambord, which also dates from the time of Francis I., is not in such good taste as the bridge of Chenonceaux or the charming galleries of Blois; but still it is extraordinary enough to merit attention. A donjon, flanked by four strong towers, forms the middle of the façade.

With this Gothic mass are combined the pilasters and horizontal lines of the Renaissance. There is but little sculpture, all the ornamentation being heaped on the roofs. These consist of chimneys, dormer-windows, towers, and turrets, diversified with embrasures and curious sculptures. Amid these fantastic structures rises a lantern upon a staircase unequalled in France, and which can be seen from the heights of Blois. In this complicated staircase many persons can mount and descend at the same time, and yet be unseen by each other. Its crown is formed of four orders. The first is an elegant Corinthian portico, circular, and decorated with columns and pillars. Across the high arches of its arcades we see the spiral stair. The archivolts are surmounted by a cornice, an entablature, and a balustrade. On the second stage the turret is pierced with square windows; it rises, boldly sustained by buttresses, in the form of demi-arches. Above the demi-arches is an entablature and cornice. It terminates in a pointed ornament like a pinnacle.

The most important parts of the château of Fontainebleau date from the same period. It was commenced by Francis I. and Henry II., ornamented by Charles IX., doubled by Henry IV., enriched by Louis XIII. with a beautiful stair, mutilated by Louis XV. and Louis XVI., repaired by Napoleon and Louis XVIII., and completely restored by Louis Philippe.

Before the sixteenth century Fontainebleau was only a place of assembly for huntsmen, having only a donjon, a chapel of the time of St. Louis, and divers buildings occupying the circumference of an irregular court called the Oval Court. Francis I. razed the ancient building, with the exception of the donjon; replaced the massive gate with an

The Château of Chambord.

elegant pavilion, called the Porte Dorée, consisting of two storeys of alcoves; raised in front of the chapel a portico surmounted by a monumental throne, where the great persons could sit and behold the tourneys held in the court below; and constructed the gallery that bears his name.

The Porte Dorée of the Château of Fontainebleau.

The buildings of the Court of the White Horse, where Napoleon bade adieu to the guard, were also commenced by Francis I.

A few words on the interior of the Galleries of Francis I. and Henry II. will give an idea of the marvellous taste of the decorations of the French Renaissance at the time when Primatice, Rosso, Nicolo dell' Abbate, Cellini, and Serlio

painted the ceilings and walls, designed the arabesques, and traced the outlines of the fire-places and wainscotings.

The Gallery of Francis I. measures 208 feet by 20. Its ceiling, in gilt walnut, is divided into rich compartments.

Gallery of Francis I. at Fontainebleau.

Armorial bearings, trophies, salamanders, and interlaced monograms shine out from the rich panelling that ornaments the walls to the height of 6½ feet. The spaces between the windows are partly filled up with paintings and partly with alti-rilievi, representing all the fictions of the ancient mythology, such as chimeras, nymphs, and fawns, encompassed with emblems and garlands. The inlaid floor corresponds with the riches of the ceiling and the panelling.

Court and Dauphin Gate

The Hall of the Fêtes is 85 feet long, and the width between the piers is 30 feet; though from window to window the width would be considerably wider, as the walls are very thick and the embrasures deep. This arrangement was very suitable for the kind of entertainments formerly given here, for those who were not actually engaged in the amusements of the hour could stand within the embrasure, looking on from their retreats upon the ballets and dances. Ten great arcaded bays, 10 feet high, light this magnificent hall, and from it a splendid view of the gardens and flower-plots, and further off the massive foliage of the great forest, may be obtained.

On the ceiling, great octagonal compartments, decorated with devices, profusely ornamented with gold and silver, shine out from the colours of the background. As to the woodwork, it is magnificent. The carving of the tribune, the paintings by Nicolo under direction of Primatice, the stucco mouldings that enrich the arcades, all combine to make this great hall a work of art that commands admiration. Let the reader imagine himself in these gorgeous apartments when in their prime, amid all the splendour of the costumes of the sixteenth century, let him people this immense conglomeration of courts, saloons, and peristyles with the busy life of a former time, and Fontainebleau would truly appear to be one of the most magical abodes ever erected by human art.

The reign of Valois may be said to be the culminating point of the French Renaissance. To this house do we owe the greater part of the beauties of the Louvre, which forms with the Tuileries the richest contribution of palaces of which any European nation can boast.

Historians do not agree as to the origin of the Louvre

It is supposed that a donjon occupied the site before the time of Louis le Gros, who fortified it with ditches, towers, and walls. Charles V. inhabited the Louvre—raised it, fortified it, crowned it with platforms, and made in fact what we see it in the picture preserved at St. Denis.

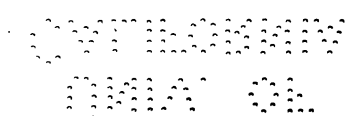
After the great repairs made on the Louvre in 1539, Francis I. commanded Pierre Lescot to rebuild it. The new Louvre, which we now call the old Louvre, was commenced in 1541. At the death of Francis I. the works were but little advanced, and in 1548 there only existed two wings of the square on the south and west. Nothing is better conceived, or more richly ornamented, than the pilasters of the ground-floor and the two storeys decorated by Jean Goujon and Paul Ponce, a pupil of Michael Angelo.

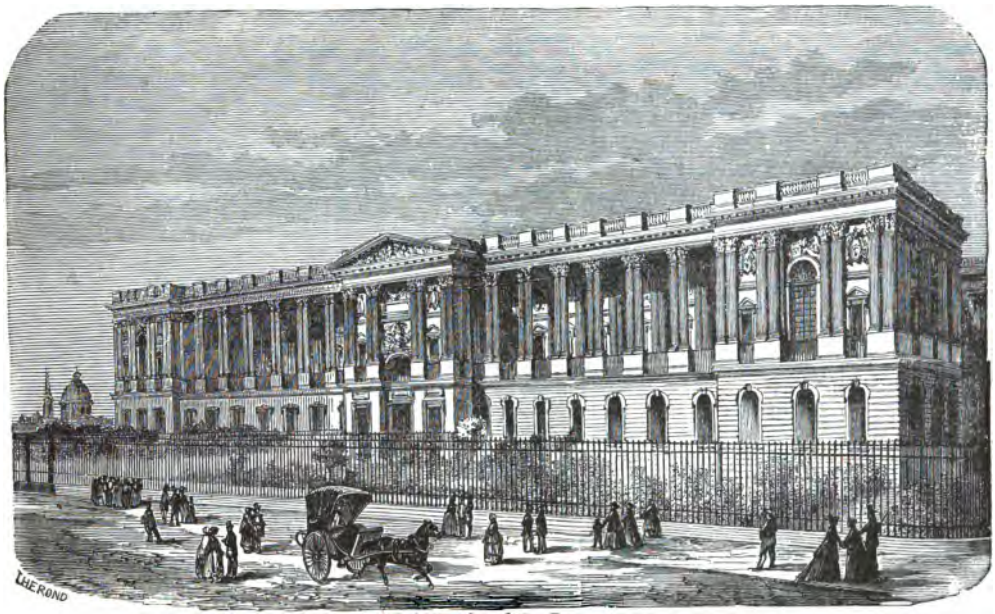
Especially in the composition and proportions of the roof has Lescot shown himself a consummate artist. Just as a woman reserves all her resources of the toilet for her *coiffure*, so this architect arranged his work in such wise that the luxuriousness of decoration should go on increasing as the building ascended, and should be most abundant and beautiful at the roof. Nor did he even stop here. Frankly accepting the necessities which the high roofs and roans placed upon him, he threw so much art and taste into the composition of the leaden pipes and the chimneys, he imported such research into the ornamentation of the gilded ridge-leads which crowned the summits of the roofs, that the highest parts of the building might well pass for the most beautiful.

"Consider the attic alone," says Reynaud, "and you will see pilasters supporting a roof in perfect harmony with them, and above the cornice a chimney of the most elegant

The Louvre.

Colonnade of the Louvre.





Colonnade of the Louvre.

UNIV. OF
CALIFORNIA

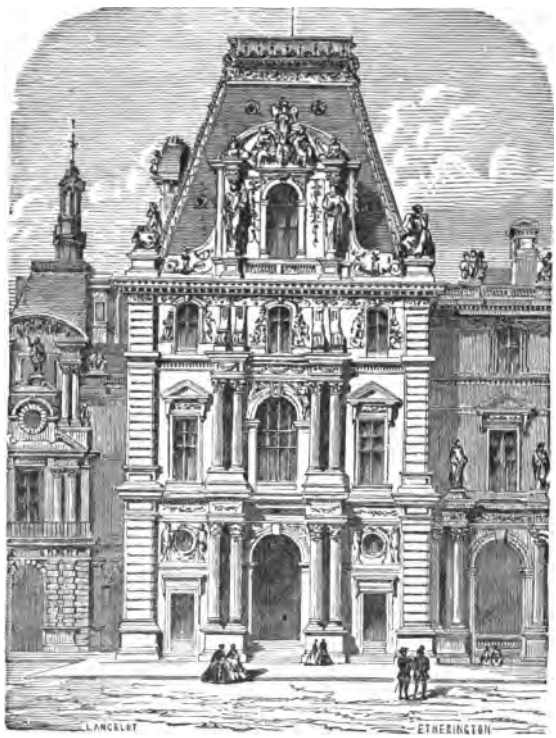
shape. Glance over the whole edifice—all these separate divisions seem to form only one whole—and you are filled with admiration at the view of the roof, which contains most character, is the most elegant and rich, and in one word the most beautiful in modern architecture. What strikes you in this masterpiece is that execution has not shown itself inferior to conception, that the style corresponds with the thought sought to be embodied, and that both idea and expression are harmonious."

While Philibert Delorme constructed the Tuileries for Catherine de Medicis, Charles IX. commenced the gallery with alternate courses of stone and marble which runs along the garden of the "Infante." The first storey was only raised by Henry IV. The Gallery of Apollo, as we see it to-day, dates only from 1662.

The sixteenth century—one does not know why—was occupied in putting an end to the work of Lescot; that is to say, in shutting up the court of the Louvre, so admirably commenced. It was proceeded with only under Louis XIII. Lemercier had the idea of giving to the court its present dimensions by doubling the length of the aisle; he conceived also the four great pavilions which occupy the centre of each side; but as public taste changed, he renounced in part the designs of Lescot. He lavishly adorned the three sides of the court. He did not achieve the completion of the work, but his plans were highly respected.

Bernin was called from Italy to continue and complete the undertaking. His plans entirely nullified and stultified what had already been done, and it was fortunate for the Louvre, whatever it was for the architect himself, that he was obliged, on account of ill-health, to return to Italy. Perrault, whose ideas about this work had always pleased Louis XIV.,

next obtained the chief superintendence of the building He carried out his ideas to some extent, but did not liv

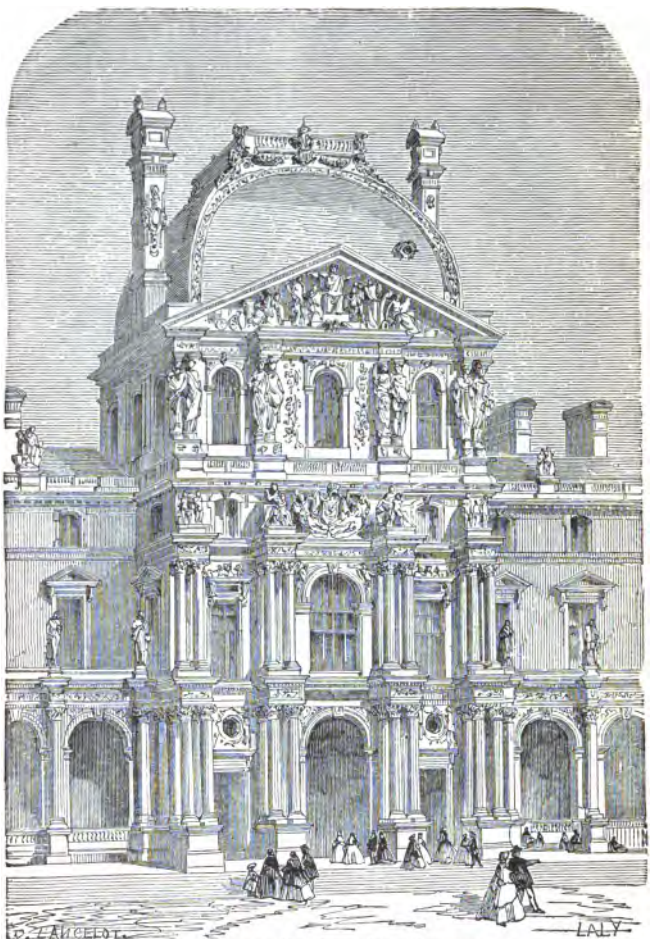


Richelieu Pavilion of the Louvre.

to see the building completed. The court of the Louvre was finished under Louis XV., according to the designs of Perrault. The works, interrupted during the end of the

UNIV. OF
CALIFORNIA

UNIV. OF
CALIFORNIA



The Turgot Pavilion (New Louvre).

eighteenth century, were recommenced under Napoleon with great activity. Several pediments, vestibules, and the façade of the quay, date from this reign. Percier and Fontaine had the good sense to follow in the footsteps of Lescot and Paul Ponce, and the beautiful Hall of the Caryatides was completed almost exactly as it was conceived by the original artist.

Decrees of the Provisional Government in 1848, and of the President of the Republic in 1852, resulted in an Act for the junction of the Louvre and the Tuileries. The plans of MM. Visconti and Lefuel were the best that could be adopted, and the new Louvre remains to the present the largest architectural structure of our time.

Thus was finished, in 1858, the work of four centuries. The Tuileries and the Louvre combined cover a space of 61,500 square feet. At the exterior the mass of the Louvre extends 536 feet, and each interior face of the court is 390 feet. The long Gallery of the Quay, from the Pavilion of Charles IX. to that of Flore, is more than 1,650 feet. There are also two parallel lengths of 2,270 feet, which are covered with superb edifices, the construction of which has been an indication of the increasing power and glory of France.

CHAPTER XIV.

CLASSIC ART AND THE DECADENCE OF ARCHITECTURE.

NIPPED in the bud like a new spirit in its birth, the architecture illustrated by Peruzzi, Lescot, Philibert Delorme, gradually declined, became heavy, and gave way to a revival of heavy classic art; although it still preserved in the seventeenth century a certain measure of majesty in its monotony.

Three sides of the court of the Louvre, and the colonnade of Perrault, have, as we have seen, given us beautiful specimens of the classic style of that regular and cold art, of which Mansart and his nephew were the unquestionable masters. Versailles is the most complete type of it. That palace was the seat and tomb of the old dynasty of French monarchs, and has held a great place in the history of France.

Louis XIII. built at Versailles a sort of feudal château, flanked by four large pavilions at the angles, encircled by ditches with draw-bridges. Louis XIV. continued his father's labours, but in his additions the feudal character is no longer seen. The modest hunting rendezvous of Louis XIII. presents toward the town a façade in stone and brick, the arrangement of which forms an agreeable perspective. At the end of the Court of Statues are three other courts, all smaller in size, and of which the last, the Marble Court, composes the sanctuary, around which were the apartments set aside for the royal household.

The buildings were commenced a little after the death of Mazarin, in 1661, under the direction of Levau, and were continued by Mansart from 1670 to 1684. They were severely criticised by court retainers. Saint Simon declared that the place chosen was "unpleasant, sad, without view, without wood, without water, without land, because the ground was sandy and marshy." To this complaint the finished structures are a victorious answer, opening as they do upon beautiful gardens, with a thousand fine views and vistas, and numberless sheets of water. It is only fair to say that the architects themselves experienced a hundred difficulties in carrying out this undertaking. The chief difficulty was to obtain funds. Ninety millions of francs (which at the present day would be worth four hundred millions) were sunk at Versailles under Louis XIV.; and Mirabeau valued the total expense at twelve hundred millions. There is no doubt that these enormous expenses affected the economy of the public finances, and largely contributed to the embarrassments which resulted in the fall of the monarchy.

The façade overlooking the garden was a repetition of the arrangements common to all the great buildings of the reigns of Louis XIV. and Louis XV.—a storey richly decorated placed upon a sub-basement, which serves as the ground-floor. Here the great length takes away from the effect of the height, and the eye is fatigued by a uniform line. Yet, seen at sunset from near the Swiss lake, the profile of the façade produces a grand impression of nobleness and simplicity.

The interior arrangement, which has been subordinated to the preservation of the ancient château, is imperfect; the vestibules are ill-placed; and the stairs do not correspond

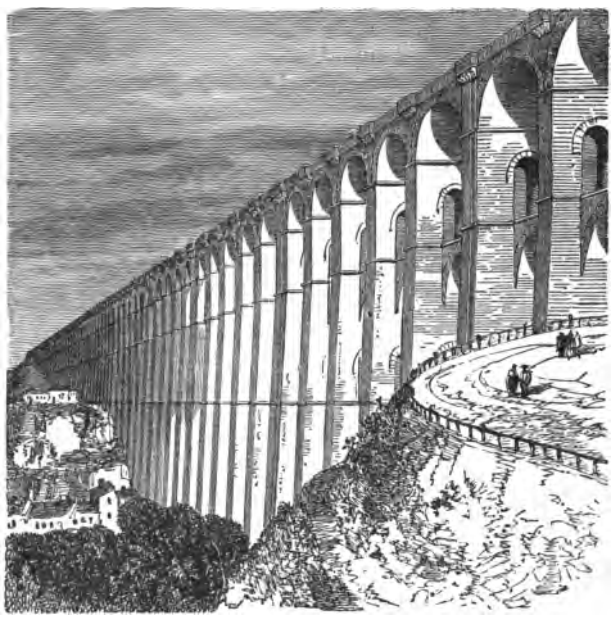
with the richness and grandeur of the apartments. But these defects are more than compensated for by the splendid pictures of Lebrun, Audran, Coypel, Philippe de Champaigne, Jouvenet, Lafosse, and Lemoyne. Ancient statues, the rarest marbles, fine specimens of the goldsmith's art, jewels, and curiosities of every description were formerly lavished on these empty saloons. We may still judge of the former splendour of Versailles by the famous Mirror Gallery. It is 228 feet long by 33. Its seventeen great crosses correspond with the mirrors, which reflect the gardens and the lakes. Forty-eight pilasters in marble, of the Composite order, enclose the windows and the arcades. Monograms, devices, trophies, garlands, and figures of children appear on the entablature and the cornice.

The chapel, the last work of Mansart, was described by St. Simon as a sad catafalque, and by Voltaire as a magnificent nick-nack. We cannot subscribe to these criticisms. Among the religious edifices raised on the classic model, none perhaps produce such an imposing effect.

As far as architecture is concerned, the present century fluctuates from Greek to Romanesque, and from Romanesque to Gothic, constructing churches without character, and many palaces which are more like common houses or barracks. Yet it is necessary to guard against premature criticism. Posterity will judge our works better than ourselves.

The New Opera will perhaps take rank, who knows? among the Marvels of Architecture. We will glance very briefly at a few specimens of French imitative brilliancy.

The Madeleine—that false, ancient temple, the decorated perspective of which so well adorns the axes of the Place de la Concorde, and seems reproduced as if by miracle on the other side of the Seine in the façade of the Corps



Viaduct of Chaumont.

Legislatif—is not, it must be confessed, without grandeur and beauty. If we forget for a moment that it is only an imitation of Greek work, a Parthenon or Corinthian temple of Theseus, we shall admit the noble proportions of its colonnades and its front, and the good effect of the vast stairs in

front of it. It is more than 325 feet long by 130 feet broad It is a single rich nave without any windows, and lighted by gilded cupolas. The greatest sumptuousness characterises this Greek sanctuary. Every sort of ornamentation—the arches of St. Sophia, the Corinthian arrangement of Greece, the pilasters of the Renaissance, the gildings of Versailles and Genoa, are all to be found in its composition. But why, it may be asked, make a church like an ancient temple? No two things are more at variance than the genius of Greece and the spirituality of Christianity. Napoleon conceived a more just idea of the thing, for he wished to dedicate the Madeleine to the glory of the French army. The foundations date from 1764, but the Greek form belongs to the architect Pierre Vignon, who worked upon it from 1806 to 1828. The building was not finished till 1832.

The plan of the Bourse belongs to M. Brongniart, who superintended the building of it between the years 1808 and 1813. M. Labarre continued and finished it in 1827. In spite of its great faults—its gloom, want of air and light in the great central hall, and also its peristyle open to wind, rain, and sun—this work is by no means to be disdained.

The Columns Vendôme, Juillet, and Palmier belong to ancient art. The first, famous through the odes of Victor Hugo, trophied with French victories, nobly decorates the square of the same name. It is an imitation in bronze of Trajan's Column, but very inferior to its model in the sculptures.

The Column of Juillet is simple and naked, but in a beautiful style. Its base is of bronze, but the pedestal is of stone. Under the base reposes the combatants of July, 1830; and upon the capital stands a bold, spirited figure of Liberty.

UNIV. OF
CALIFORNIA

Opera House, at Paris

The Column du Palmier is circled with rings to represent the knots of the tree, and surrounded at its base with allegorical figures.

The triumphal Arch d'Etoile belongs like the other columns to the first empire. Commenced in 1826 by Chalgrin, it was finished in 1836. Its inscription bears the words *Aux Armées Françaises.* It is 142 feet wide, 150 feet high, and 72 feet broad. The grand arch of its façade measures 84 feet by 45 feet. It is the greatest structure of its kind. Nothing is more simple than its arrangement. It consists of four openings surmounted by a richly sculptured frieze, a very bold entablature, and a sloping roof, on which are thirty shields bearing the names of great French victories.

Before quitting this part of our subject we must not forget to mention the aqueduct of Chaumont, which crosses a valley 1,950 feet wide. It is absolutely bare of ornaments, and its high and light arcades, which reach a height of 165 feet from the valley, and the flanks of which are pierced with two galleries parallel with the upper way, are supported upon great piers.

The New Opera House, at Paris, has been built by M. Garnier. The principal façade, unhappily blocked from view by its situation, is composed of a basement of arcades, a Corinthian colonnade forming a gallery on the first storey and a very bold projecting entablature, with circular front. Elegant cylindrical pavilions are applied to the lateral façades.

The New Opera is composed of eleven storeys, is 234 feet high, 332 feet wide, and 494 feet from front to back. It is in fact a cathedral. From the bottom of the boxes to the top of the stage is 260 feet.

It is in the roofs that the great originality of the building

consists. All the different divisions have been severely commented upon, but in the mixed character of the roofs there is nothing, in our opinion, incompatible with beauty. Behind the peristyle, which comes before the green-room, is seen the cupola of the hall; and behind it again, above the cupola, the grand triangular frontage, decorated with groups of colossal figures.

View of Windsor Castle

CHAPTER XV.

ENGLISH ARCHITECTURE.

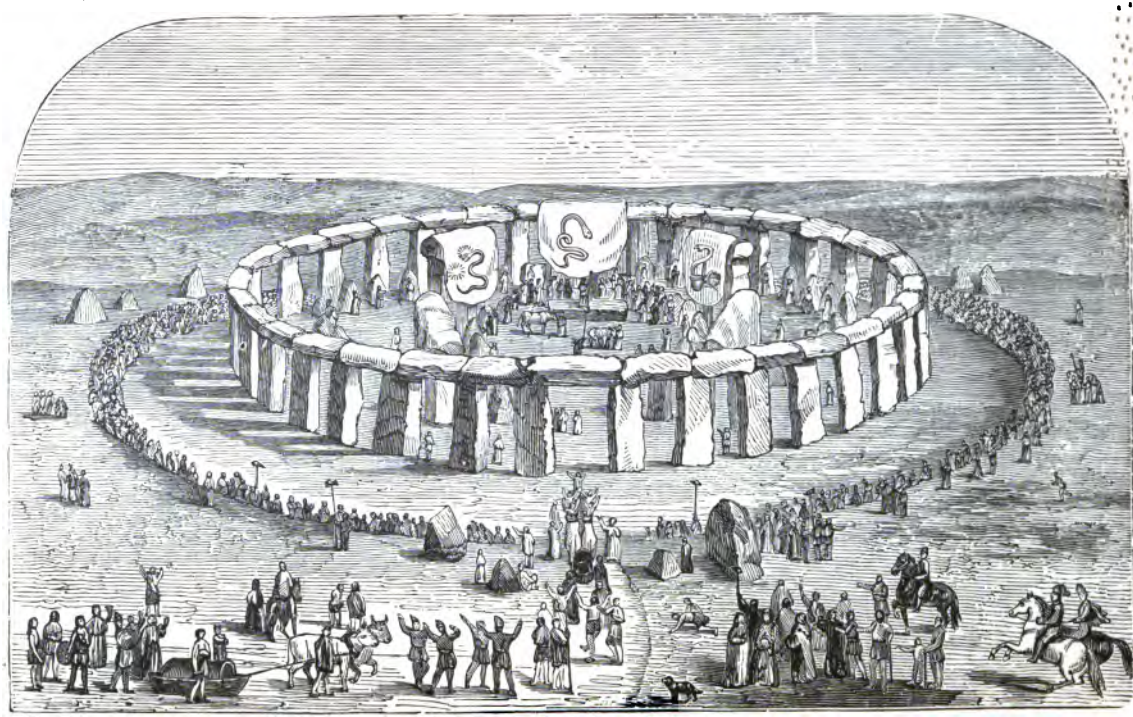
THE history of architecture in England is simply the history of the social and material progress of the country. In proportion as the latter advanced the former flourished; and the successive eras through which we have passed towards the attainment of our present pre-eminent position, mark but so many epochs in the perfection of the arts of civilisation, of which architecture may be said to be one of the best understood and most important. Like the whole of Western Europe, we were indebted for our first ideas in architecture to Greece and Rome; and though our architects have not proved themselves creators of style in the sense that the master geniuses of the former country undoubtedly were, they have at least so modified and adapted what they borrowed, as to produce buildings eminently suitable to the character and traditions of the Anglo-Saxon race, and the climate and physical attributes of the country.

The first rude dawnings of architectural science in Britain are to be traced back to the Roman period. Colonisers and proselytisers in the strictest acceptation of the term, the Romans ever sought to carry their civilisation in the track of their eagles. Wherever they settled, they left manifold traces of their settlement in the plans which they designed, and the works which they carried out. Merely to conquer nations by force of arms, was with them

far from being an aim worthy of achievement. What they strove after and desired, was to subdue them to the practice of the peaceful arts, and to the cultivation of those habits of industry and dignified ease which had made Rome the object of the fear and admiration of the world. Gifted with such feelings, and endowed with the insatiable desire to promote civilisation wherever they went, it is not to be wondered at that, even in so remote and barbarous an isle as was Great Britain when they first took possession of it, they should carry their traditions with them, and strive to impress upon its rude inhabitants the character of their own genius in the arts that elevate and humanise mankind.

Accordingly we find that, during the occupation of the Romans, many small towns and forts were erected, and a variety of structures raised, some of which, in the shape of the celebrated walls, are still reckoned amongst our architectural marvels by antiquarians and men of science. Evidences exist to prove that considerable edifices were built during this period, which, after the religion of the country was changed, were devoted to the purposes of Christian worship; but the style of these buildings, their number, and the sites which they occupied, have alike perished from recollection. Thus much is certain, however, that they were, both in dimensions and execution, of a character sufficient to sow, as it were, the seeds of architectural art in England. Had circumstances been favourable, there can be no doubt that the Britons would very materially and immediately have profited by the structures bequeathed to them by the Romans, after the latter ceased from their occupation; but their attention was drawn off from these by the peculiarity of their own position. Subject to

UNIV. OF
CALIFORNIA



Stonehenge (restored).

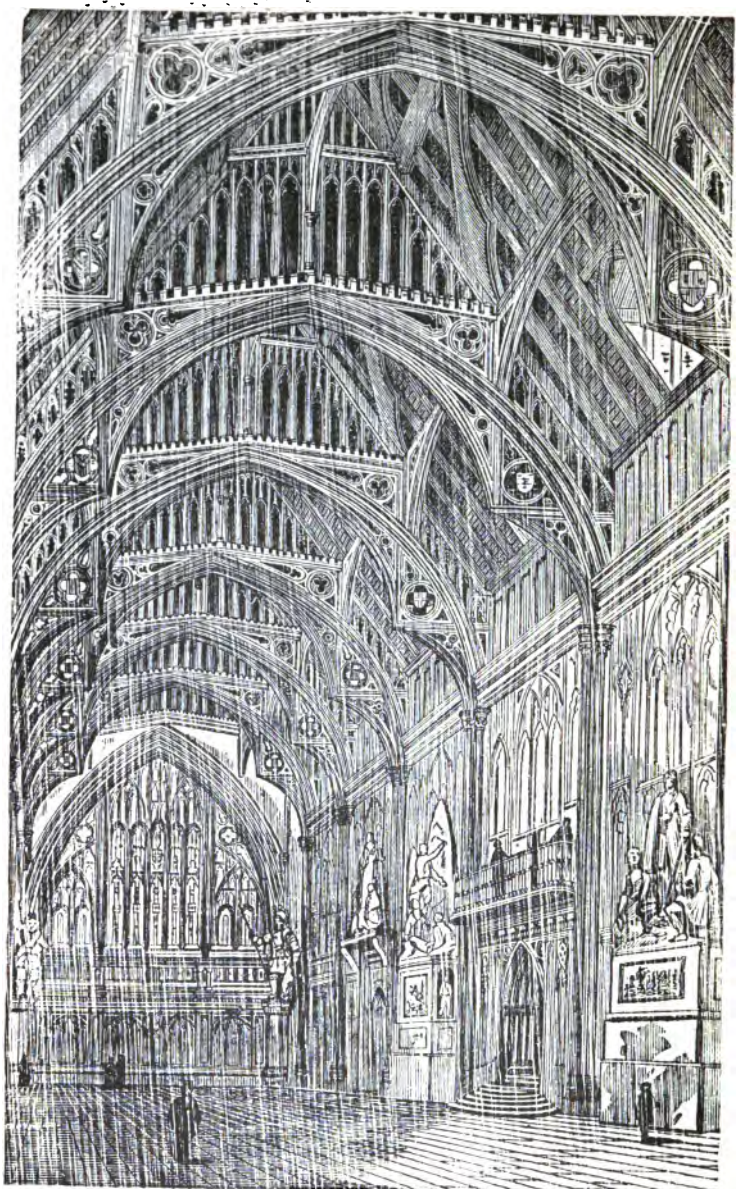
frequent incursions of enemies, compelled to wage ceaseless war to maintain their own existence, they had neither the time nor the inclination to devote themselves to the cultivation of those arts of civilisation into which they had been initiated by their Italian conquerors. Architecture languished in consequence, and little or no progress was made for a very considerable time afterwards. The conversion of the Saxons to Christianity, however, towards the close of the sixth century, had among its other great and lasting results, the effect of giving quite an extraordinary impulse to building; and in the necessity that arose for providing religious houses for the celebration of the rites of the new religion, sprang up a zeal for building and ornamentation which led to general attention being directed to architecture. True, the structures that were then raised were composed almost entirely of wood; but the construction of these rude dwellings gradually familiarised the minds of the people with edifices for the purposes of religious worship, which led about a century later to the introduction of the art of working in stone; and this in its turn was not long in developing into noble monasteries, abbeys, and cathedrals.

As we have seen, the first rude dawnings of architectural science arose out of the Druidical custom of placing huge stone pillars upon end, and uniting these at the top by means of a third horizontal slab. France, as we have already described, possesses abundance of these ancient remains, and England is also rich in them. Stonehenge is perhaps the most celebrated specimen of such monuments that exists in the world, and has for centuries been the object of the admiration and inspection of archæologists, historians, and travellers. Some idea of what its aspect must have been in the olden time may be gleaned from

the illustration which we append, representing it after an ideal restoration

The Roman influence would seem to have been the first to weaken the veneration with which these Druidical remains were regarded by the simple and ignorant inhabitants; and the introduction of Christianity completed the great work which was thus so auspiciously commenced. Following these two came the Norman conquest, which introduced a new era and exerted an influence upon architecture which was more wide-spread and more immediately direct. Great improvements were introduced into the art of building by the latter event, and the Norman taste soon began to prevail. Architecture made great strides, and from the year 1066 to that of 1154, many structures were erected, the design and ornamentation of which were richer than anything which had previously appeared. Numerous castles and castellated mansions of the nobility took their rise during this period; and more than one-half of the English cathedrals show traces to this day of the influence of the Norman style of workmanship and design.

Those countries which received their religion from Rome, and which did not contain imposing pagan temples like that nation, capable of being transformed into edifices for Christian worship, constructed churches in imitation of those that were to be found in the then capital of the world. Hence arose the Gothic style of architecture, which sprang into ascendency during the Middle Ages, and in no country, perhaps, took such deep root and developed so largely and magnificently as in England. This style is also widely known as the Pointed style of architecture, and is very largely to be found in the Saxon and Norman edifices of this country. What is known as



Guild Hall.

the Corinthian order of Pointed architecture is, indeed, almost peculiar to England; neither France nor Germany—in both of which countries Gothic architecture was eagerly accepted—being able to produce anything equal in their several styles to St. George's Chapel at Windsor, King's College Chapel at Cambridge, and Henry VII.'s Chapel at Westminster.

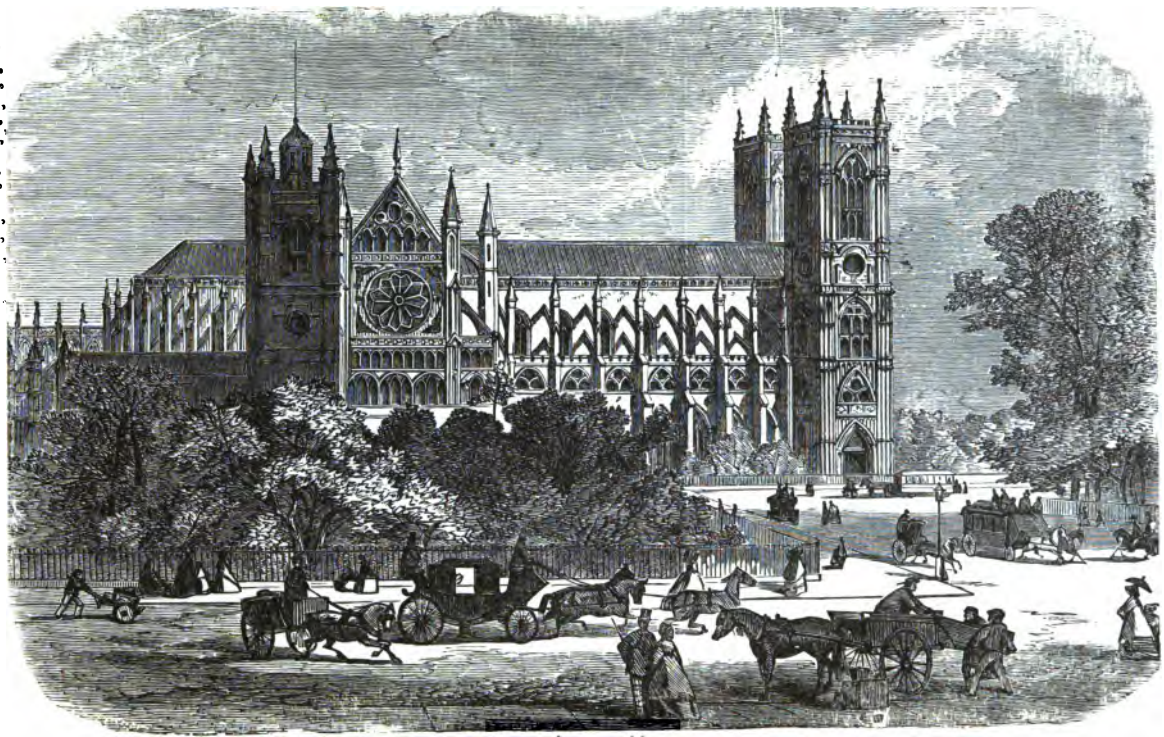
Though the Gothic and Pointed styles are often confounded, there is considerable distinction between them. In Gothic, the general running lines are horizontal, as in entablatures and single cornices; in Pointed, the general running lines are vertical. Arches are not necessary in the former, whilst in the latter they are essential. The Pointed style began to assume prominence during the reign of Henry II.; but perhaps the most correct epithet to apply to the Gothic buildings which sprang up in England after its first introduction in such profusion, is Anglo-Gothic. Impressive grandeur is perhaps the pervading character of this style—a grandeur arising at once from the simplicity and massiveness of its proportions. The interiors of Norwich, Durham, Chichester, Canterbury, and numerous other cathedrals, are fine specimens of the beauties of this particular style, exemplifications of the excellencies of which are also to be found in the ruins of abbeys, monasteries, priories, and churches of various descriptions which are scattered more or less over every part of the United Kingdom.

Pointed architecture has very properly been divided into three particular styles, each instituted at a different period, and each of which possesses distinct peculiarities and excellencies. The first took its rise with the invention of the pointed arch, towards the latter part of the twelfth

century, the second towards the beginning of the fourteenth, and the third towards the close of the same century. The chief characteristics of the first style are: pointed arches, long narrow windows without mullions, and a peculiar ornament resembling the teeth of sharks. Salisbury Cathedral is the most perfect specimen of this style. A large portion of the venerable Westminster Abbey, the transepts of York Minster, the fronts of several of the southern cathedrals, and numberless monastic edifices, also belong to this style.

Westminster Abbey is so familiar and so well known, that any detailed description of it is needless. Even those who have not had the privilege of seeing it—and it has perhaps received within its walls as many pilgrims from all parts of the world as any ecclesiastical building in Great Britain—are well acquainted with it through the medium of prints and pictures, and know its towers and multitudinous buttresses as well as the spire of their own village church. Apart altogether from its architectural pretensions, it has to the people of every civilised nation a charm and attraction peculiar to itself, and which no other building in the world perhaps shares with it to an equal degree. The dust of England's most celebrated warriors, statesmen, philosophers, poets, and men of intellect, reposes within its sanctuary, and lends a lustre and dignity to its fame.

The second style of Pointed Gothic architecture differs materially from the first. It has large windows and pointed arches, divided by mullions and flowing lines of tracery forming circles, and it is very rich in ornamentation. Unlike the first order, the second does not possess a single complete ecclesiastical edifice as a specimen of its style; but nearly all our pointed buildings display rich evidences



Westminster Abbey.

of its prevalence and influence. Perhaps the best existing specimens are to be found in St. Giles's Cathedral at Edinburgh, and in Melrose Abbey. The latter edifice is, taking it all in all, perhaps the chief architectural pride and boast of Scotland. No other ancient structure in the northern part of the kingdom is better known, or attracts such hosts of tourists and admirers. This popularity is undoubtedly due primarily to its wonderful architectural details, its history, its beautiful proportions, and its minute sculptural achievements; but it is also in a large measure attributable to the charm which the genius of Sir Walter Scott has thrown around the structure. The wonderful fancy of the great Wizard of the North invested it with even more than its ancient attractions, and has caused many who are familiar with his prose and verse to reconstruct it mentally with more than its original splendour. Situated in a lovely country, within easy reach of the classic Tweed, it has long been the pride of the natives and the object of the admiration of visitors. Descriptions of its pointed arches, roses, buttresses, entablatures, architraves, mullions, and spires, would fail to give the reader so correct and vivid an idea of the ruin as the accompanying illustration, which represents it with singular fidelity. Sir Walter Scott, who loved it well, says—

> "If you would see fair Melrose aright,
> Go visit it by the pale moonlight."

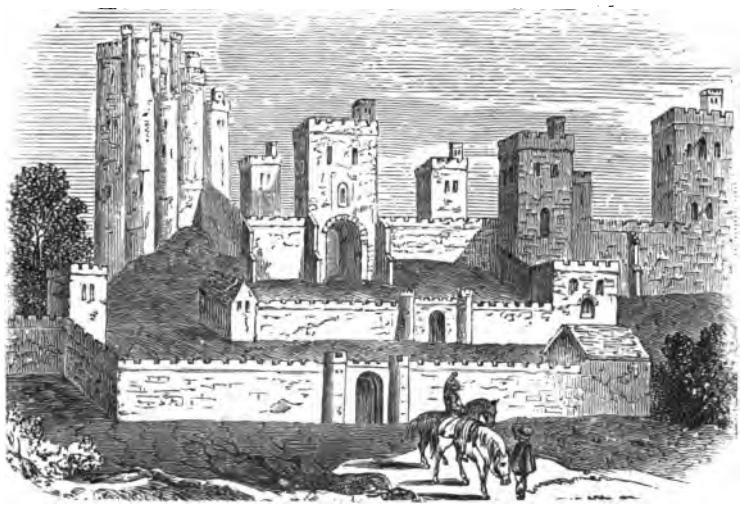
But whether seen under the mellow influence of the moon or the richer radiance and more searching splendour of the sun, it is alike beautiful, striking, and impressive.

The third style of Pointed architecture is known as the Florid Gothic. This style is very distinct from the others.

The mullions of the windows and the ornamental panellings run in perpendicular lines. Its chief characteristics are: increased expansion of the windows; gorgeous, fan-like tracery of the vaultings; heraldic elements in the enrichments, the horizontal lines of the doorways, the embattled transoms of the windows; and the enrichment of the flat surfaces. Briefly, the difference between this and the other styles may be said to lie in the form of the arches, the arrangement of the tracery, and the mode of enrichment. Bath possesses the only entire specimen of this style, though many cathedrals display portions of it. The quaint front of Westminster Hall, for instance, is a good specimen, as also the west fronts of Gloucester, Winchester, and Chester Cathedrals. Illustrations of this style are also to be found in St. George's Chapel at Windsor, Henry VII.'s Chapel at Westminster, and King's College Chapel at Cambridge.

Pointed architecture prevailed, and increased in popularity, up till the time of Henry VIII., and during the time it held the ascendency numbers of ecclesiastical edifices, that have since been the admiration alike of the ignorant and the learned, were erected. During the reign of that monarch, however, this style collapsed, and although it did not immediately fall out of fashion, it was so seldom employed thereafter that it may be said to have gone out of existence so far as its national character is concerned. About this time the Italian architects were beginning to make their influence be visibly felt, and the decay of the Pointed style gave rise to a composite order, in which the vagaries of the Italian school had full scope to display themselves. Accordingly, during the reign of Elizabeth there sprang up a new style, which was a singular admixture of the Italian and Pointed schools, and which has since

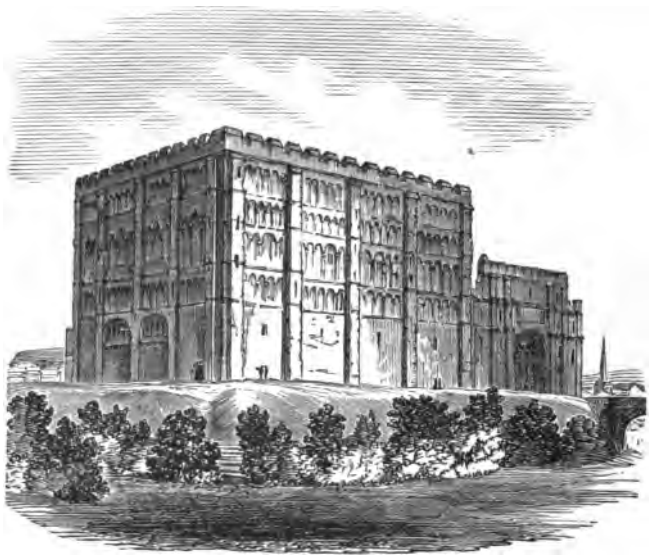
become widely known after the name of that monarch. Some writers have declared that the introduction of this style into England was owing to the influence of the Reformation; but it is with greater show of reason to be traced to the reform in architecture which took place in Italy about that time. Whatever the merits of the



Pontefract Castle.

Elizabethan school may have been supposed to be, it certainly displayed qualities and attributes that were both original and admirable compared with that which immediately followed. Colourless alike in politics as in art, the reign of James I. may almost be passed over without comment, for it produced nothing in architecture worthy either of the national character or of the traditions which

previous generations had handed down. All that was achieved was executed by the celebrated Inigo Jones, who, having graduated deeply in the Italian school, and having been taken into the royal favour, exerted himself to trans-



Norwich Castle.

mogrify architectural art as it then existed in England. He introduced the Italian Pointed style into many of the then religious edifices, executed the well-known banquetting house at Whitehall, and designed the church of St. Paul in Covent Garden.

The period from the accession of Charles I. to the Restoration was too troublous and momentous in a

UNIV. OF
CALIFORNIA

Melrose Abbey.

political sense, to allow of much time being devoted to those arts of which architecture forms one of the most distinguished. When the merry monarch ascended the throne, however, attention again began to be seriously directed towards them, and amongst those who then rose into prominence the name of Sir Christopher Wren stands out unique and pre-eminent. He it was who prevented English architecture from being depraved by French taste, and who executed works which to the present day remain the monuments of his genius and perseverance. The great fire of London, which happened in 1666, sweeping away so vast a portion of the metropolis, afforded to his genius an almost unexampled field for the display of original gifts of construction. Fired by the prospect which it opened to his invention, he drew out plans for the restoration of the city on a scale worthy of his great fame. These were not adopted; but, although he was baulked in the execution of his great enterprise, sufficient scope was given him to enable him to design works that have since been the admiration of the educated. His labours lay chiefly in the field of ecclesiastical architecture, and here he achieved triumphs that have not since been surpassed. He may be said to have been the inventor of the tapering steeple, which now forms so prominent a characteristic of our churches, and in the originality and elegance of which he is still unrivalled. Bow Church, and St. Bride's, Fleet Street, in London, may be cited as among his best specimens.

The masterpiece of this distinguished architect, however —that by which he is best known, and which may be called one of the crowning glories of English architecture—is St. Paul's Cathedral, which so appropriately occupies the ascent of Ludgate Hill, and attracts so large a share of attention

from all visitors to the metropolis. St. Paul's, as it at present stands, is not the building which was originally designed by Sir Christopher Wren, several material alterations having been made upon his plan, which were contrary alike to his judgment and determination. Even in its present proportions, however, it is sufficiently bold, imposing, and original to attract the gaze of every beholder, and elicit the admiration of all who love massiveness, symmetry of design, and imposing effects. The first stone of the building was laid in 1675, and the edifice was completed in thirty-five years, the last stone being placed in its position in the year 1710, by a son of Sir Christopher himself. Taken altogether, St. Paul's is a really glorious architectural effort, its cupola especially being of surpassing beauty.

Sir John Vanbrugh may be said to have succeeded Wren as the custodian of the national architecture, and he introduced an Italian school that was characterised by great massiveness, which was largely employed in the construction of noblemen's mansions.

So far as architectural effort is concerned, there is nothing to note during the latter half of the eighteenth century. Sir William Chambers and Sir Robert Taylor were among our most prominent architects, and their style was based upon the Roman, or rather the Italian. Somewhat later, however, something of a revolution was effected by James Stuart and Nicholas Revett, who, by means of drawings and illustrations, familiarised the public mind with the great architectural masterpieces of Greece. This caused the Greek style of architecture to come into fashion in England, grow in popular esteem, and ultimately, to a considerable degree, revolutionise our taste in public build-

UNIV. OF
CALIFORNIA

Holyrood House

ings. The beauties of the Greek style being once recognised, our architects came also in time to give due prominence to the excellencies of the Gothic and Pointed styles, and many specimens of all these styles of architecture are now to be found in our chief cities.

The new Houses of Parliament at Westminster form by far the largest and most important pile which has been erected in this country for centuries. The old building was destroyed by fire in 1834, and the first stone of the present edifice was laid in April, 1840. Fully twenty years were occupied in its completion, if a structure can be said to be complete which is still receiving wings and additions.

In a country like England, where the feudal system so long prevailed, where border feuds and family strifes were constantly taking place, and where the superiority of the chief or baron was so constantly and so forcibly asserted, it was to be expected that there should be many remains of old castles and castellated mansions. Almost every county can show some ruin more or less celebrated, more or less complete, which in former times was the stronghold of rival garrisons, or the home of the local potentate whose power was universally acknowledged within the district over which he held sway. Such castles were of all sizes, and of every style of architecture, and played a part more or less prominent in the history of the country. Perhaps one of the most extensive and massive of those that remain is Pontefract Castle, which is remarkable, among other things, for the number and disposition of its towers.

Curiously opposed to this in style, dimensions, and design, is Norwich Castle, which belongs to the plain, square, monotonous school of strongholds, that prevailed to so considerable an extent upon the Borders.

Holyrood Palace, which has played so important a part in the history of Scotland, and which forms an object of such interest to all tourists and visitors to the northern metropolis, may be said to belong to the baronial or castellated style of edifices. Situated at the foot of the old classical Canongate of Edinburgh, under the shadow of picturesque Arthur's Seat, it forms a pleasing feature in the landscape, and awakens strange thoughts in the mind of the observer by reason of the historical associations connected with its name. Most of the stormy scenes, during the stormiest period of Scottish history, are connected either directly or indirectly with old Holyrood, which has been graphically described by Sir Walter Scott in his "Marmion." Popularly, however, it is chiefly known from its connection with Mary Queen of Scots, and the scenes with which the life of that beautiful but unfortunate princess was mixed up. Here the notorious Rizzio was murdered, and here are yet to be seen some of the veritable furniture which formed part of the decorations of the palace in those ancient and troublous times. Recently the palace has been inhabited by Queen Victoria, on her way northwards to her Highland residence at Balmoral, but the building now is merely used as the dwelling-place of certain officials connected with the Royal household.

Among the other features of English architecture worthy of note, are the interiors of certain of the halls which belong to the metropolis and the other great cities of the empire. Those of Westminster and the Guildhall are especially worthy of admiration on account of the loftiness of the roofs, the graceful arches of the rafters, the richness of the oaken decorations, and the solidity and variety of the carving.

As regards domestic architecture, England has made great progress of late years—a progress which is most observable in the dwellings of the middle and lower classes. The country seats of the nobility are for the most part edifices that have been raised in former generations, and not a few date back to periods of historic interest. The growing wealth of the country having recently greatly increased the number of the wealthy middle classes, has made them a great social power in the state, and caused them to imitate the pomp and luxury of their superiors. Mansions of almost palatial stateliness have accordingly been raised by them, which, in addition to exterior architectural pretensions, are fitted up inside with great splendour.

And while the rich have thus been improving and extending their dwellings, a corresponding improvement has taken place in those of the working classes. Private enterprise, joint-stock companies, and public associations, have all aided in the good work of pulling down the rotten, ill-ventilated, and inconvenient old houses that have so long been the reproach of our large cities, and erecting in their stead buildings suitable in every way for the wants of human beings. Great alterations in this respect have been made in most of our centres of population; and although very much yet remains to be done, the lower classes of to-day are, as regards wholesome house accommodation, immeasurably better off than were the generations immediately preceding them. Public enterprise and capital have done much towards the achievement of this object, but private benevolence has done much more. Mr. Peabody, Miss Burdett Coutts, and other noble-minded ladies and gentlemen, have given enormous sums of money towards

the erection of workmen's dwellings; and the success they have achieved in this direction cannot be over-estimated. The good they have done will live after them, and their names will long be held in remembrance by a benefited and grateful people. Well may these eminent philanthropists say to others who have the means—"Go and do likewise!"

A NEW AND REVISED ISSUE OF

THE ILLUSTRATED LIBRARY OF WONDERS.

THE WONDERS OF MAN AND NATURE,

IN EIGHT VOLUMES.

THE WONDERS OF SCIENCE,

IN EIGHT VOLUMES.

THE WONDERS OF ART AND ARCHÆOLOGY,

IN EIGHT VOLUMES.

Twenty-four volumes, containing over a Thousand Valuable Illustrations.

EACH VOLUME 12mo, COMPLETE IN ITSELF.

Sold Separately at $1.00 per Volume.

Messrs. CHARLES SCRIBNER'S SONS have now begun the publishing of a new and revised edition of a series of books the success of which has been most extraordinary and lasting. THE WONDER LIBRARY brings within popular comprehension the various operations and procedures in Science and the Arts, the phenomena and laws of nature, curious and striking facts

in natural history, remarkable exploits, archæological discoveries, and a historical account of the progress of the fine arts.

The volumes are written by a number of French scientists and specialists of the highest rank, and translated and adapted for English readers by competent hands.

The subjects treated are of universal interest, and they are discussed in the popular and entertaining manner in which the French excel, and which is peculiarly adapted to interest the young, and develop their taste for studies of this character, as well as to instruct older readers.

The illustrations are so numerous that they present every phase of science with accuracy and completeness; they add materially to the attractiveness and value of the series, which is by far the most thorough, interesting and valuable of the kind ever produced.

The new edition, published at a low price, has been prepared to supply the continuous and large demand which has always existed for these books.

The great advance which of late years has been made in the Natural Sciences has offered the opportunity to greatly enrich several of the volumes, by presenting to the reader the result of the latest researches, written by experienced pens. The numerous additions have made the volumes more valuable than they ever were before; and in the cheap but substantial form in which they are now issued, they are sure of a new and increased popularity.

*** *For Sale by all booksellers, or will be sent, post-paid, on receipt of price, by*

CHARLES SCRIBNER'S SONS,

743-745 Broadway, New York.

ILLUSTRATED LIBRARY OF WONDERS.

THE WONDERS OF MAN AND NATURE.

THE INTELLIGENCE OF ANIMALS.
MOUNTAIN ADVENTURES.
BODILY STRENGTH AND SKILL.
WONDERFUL ESCAPES.
THUNDER AND LIGHTNING.
ADVENTURES ON THE GREAT HUNTING GROUNDS.
WONDERS OF THE HUMAN BODY.
THE SUBLIME IN NATURE.

THE WONDERS OF SCIENCE.

WONDERS OF HEAT.
WONDERS OF THE HEAVENS.
WONDERS OF OPTICS.
THE SUN.
WONDERS OF ACOUSTICS.
WONDERS OF WATER.
WONDERS OF THE MOON.
WONDERS OF ELECTRICITY.

THE WONDERS OF ART AND ARCHÆOLOGY.

EGYPT 3300 YEARS AGO.
WONDERS OF SCULPTURE.
WONDERS OF GLASS MAKING.
WONDERS OF EUROPEAN ART.
POMPEII AND THE POMPEIIANS.
WONDERS OF ARCHITECTURE.
WONDERS OF ITALIAN ART.
WONDERS OF ENGRAVING.

A volume in each of the three series will be issued monthly, until the entire library is completed in this new edition.

PRICE, PER VOLUME, $1.00.

NOW READY.

WONDERS OF MAN AND NATURE.

INTELLIGENCE OF ANIMALS, with Illustrative Anecdotes. From the French of ERNEST MENAUT. With 54 Illustrations. 12mo.

MOUNTAIN ADVENTURES. Compiled from the Note-Books of Distinguished Travellers, including Whymper and Tyndall. Edited, with Additions, by Hon. J. T. HEADLEY. With 41 Illustrations. 12mo.

BODILY STRENGTH AND SKILL. By GUILLAUME DEPPING. With 70 Illustrations. 12mo.

WONDERFUL ESCAPES. By F. BERNARD. With 26 Illustrations.

WONDERS OF SCIENCE.

WONDERS OF THE HEAVENS. By CAMILLE FLAMMARION. Translated from the French by Mrs. NORMAN LOCKYER. With 48 Illustrations. 12mo.

WONDERS OF HEAT. By ACHILLE CAZIN. With 93 Illustrations, and colored Frontispiece. 12mo.

WONDERS OF OPTICS. By F. MARION. With 71 Illustrations, and a colored Frontispiece. 12mo.

THE SUN. By AMEDÉE GUILLEMIN. From the French by T. L. PHIPSON, Ph.D. With 58 Illustrations. 12mo.

WONDERS OF ART AND ARCHÆOLOGY.

EGYPT 3,300 YEARS AGO; OR, RAMESES THE GREAT. By F. DELANOYE. With 40 Illustrations. 12mo.

THE WONDERS OF SCULPTURE. From the French of LOUIS VIARDOT. With a Chapter on American Sculpture. With 62 Illustrations. 12mo.

WONDERS OF GLASS MAKING. Its Description and History, from the Earliest Times to the Present. By A. SAUZAY. With 63 Illustrations. 12mo.

WONDERS OF EUROPEAN ART. Translated from the French of LOUIS VIARDOT. With 11 Illustrations.

THIS BOOK IS DUE ON THE LAST DATE STAMPED BELOW

AN INITIAL FINE OF 25 CENTS WILL BE ASSESSED FOR FAILURE TO RETURN THIS BOOK ON THE DATE DUE. THE PENALTY WILL INCREASE TO 50 CENTS ON THE FOURTH DAY AND TO $1.00 ON THE SEVENTH DAY OVERDUE.

OCT 19 1932

MAR 25 1935

FEB 6 1939

LD 21–50m·8,·32

Lefèvre, A.P.E 436333 NA200 L42 1886
Wonders of architecture
JAN 27 1927 Reid JAN 21 1927
OCT 19 1932 OCT
MAR 25 1935 MAY 6 1935
JAN 26 1939
JAN 26 1939
APR 2 JAN 26 1939
JAN 26 1939
JAN 26 1939
JAN 26 1939
MAY 6 JAN
436333 NA200 L42 1886
UNIVERSITY OF CALIFORNIA LIBRARY
YC133801